The Ideological Significance of Flint in Dynastic Egypt

(Volume 1)

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I, Carolyn Anne Graves-Brown, confirm that the work presented in this thesis is my own. Where information has been derived from other sources I confirm that this has been indicated in the thesis.

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ABSTRACT

This thesis examines a little understood aspect of Dynastic Egypt—that of the ideology of flint. Ideology is defined as the way flint is thought of rather than used. This study is unique in examining long term chronological changes in flint ideology against the background of increased metal use, and in using together text, iconography, and archaeology: studies of Egyptian ideology traditionally privilege text.

Metaphor theory is employed as an important tool to aid this study. While metaphor is frequently used in Egyptological studies of Egyptian religion, its use is rarely explicit.

The dataset brings together unpublished artefacts in British museum collections; a first hand analysis of lithics from Panhesy's house at Amarna; finds cards from recent excavations at Memphis; and textual sources, several of which have not been considered before in relation to the ideology of flint; as well as published data on Egyptian lithic material.

Chronological changes in ideology surrounding flint during the Bronze and Iron Ages, a time of flint decline, are considered. Because the nature of flint decline in Egypt has been assumed rather than known, I attempt to quantify the process.

Conclusions show that the ideology of flint was far from static but only loosely related to the kinetic decline of flint. Flint is shown to be connected with the goddesses who are the Eye of Re, with Re himself, with snakes and lions. New facets of flint ideology are uncovered, including the connection of the material with the northern sky and the link between the treatment of New Kingdom Theban flint concretions and the religious landscape of the area.

PREFACE

Unless otherwise stated, the translations and transliterations of Egyptian text are my own. Cross-references within the thesis are indicated in bold. Where forms of flint are described these follow my typology outlined in **Appendix 1**. Individual flint tools identified by accession number and not referenced, are described in more detail in **Appendix 2**. Maps in **Appendix 1** are designed to show the approximate location of sites mentioned in the text. On pages 490-491 there is a key to the sites showing which map locates them.

CHAPTER ARRANGEMENT

The thesis has 4 main sections:

1. An introduction including an overview of previous research relating to the ideology of flint (**glossary**) and brief methodological overview.
2. A consideration of the problems in defining ideology and an investigation of the basics of metaphor theory which might be useful.
3. The evidence outlining the decline of flint and metaphoric use in archaeology and text.
4. Conclusions. Metaphoric use in relation to decline of flint.

Chapter 1 is intended as a literature review and an outline of the problem to be solved and methodology for doing so. It is largely an orientation chapter.

Chapter 2 outlines the possibilities for the different types of evidence and how they may or may not relate to metaphor theory. It is also used as an opportunity to define certain critical areas such as what is meant by ideology, ritual, etc. Some of these areas are often used without critical analysis or are used but not explicitly. Metaphoric analysis, for example, is common in Egyptological studies of religion, though seldom explicit. I felt that a more rigorous application of method might better explain past ideologies.

A discussion of the decline of flint then follows, to be used as a backdrop to the evidence for ideology. In Chapter 3 the problems relating to measurements of flint decline are addressed and a method set up for measuring it which uses published information and flint in British museums. Existing methodological tactics for

measuring flint decline are generally underdeveloped requiring critical discussion in this chapter. I see measurement of skill, as an important indicator of flint use.

Chapters 4–6 then discuss the actual evidence for flint in relation to metaphor. Ideally the evidence would have been divided up according to types: burial; settlement; textual; etc. In practice, since an understanding of each individual section depends upon understanding a facet of another section, a pragmatic approach is taken. Each section starts with the primary evidence as shown by: the artefact decontextualised; the archaeological contextualised evidence; the textual evidence. However, where a discussion of other types of evidence was thought necessary to understanding it is included in the discussion.

The conclusion draws together the evidence within a chronological framework and discusses the ideology thematically. It includes an evaluation of the methodology and suggestions for further research.

Appendix 1 consists of the typology. Appendix 2 consists of the database of flints from British museums.

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Firstly I would like to thank my supervisors David Connolly and David Jeffreys and later, Norah Molony. David Jeffreys kindly made available small find records concerning lithics from recent excavations at Memphis and both David Connolly and Norah Moloney have been invaluable in advising on lithics. Particular thanks must go to Ruth Whitehouse and John Tait who were patient supervisors during the latter years of thesis construction. I would also like to thank my unofficial supervisor, my husband, Paul Graves-Brown, who has been encouraging and supportive throughout.

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Finally, this thesis grew out of an interest in Egyptian lithics sparked by work curating the Egypt Centre, Swansea University. I should like to thank my line managers and colleagues at Swansea University for allowing me to undertake this PhD and also for their kind words of encouragement.

1. INTRODUCTION, PREVIOUS STUDIES, OVERVIEW

This thesis explores how flint and flint working were understood in ancient Egypt, its ideological rather than practical use. I use the data sets of flint in British museums, published information on excavated lithics, and Egyptian texts, bringing together archaeology and history, ideology and technology. It is recognised that flint has many functional advantages, even over metal, and thus I do not imply that flint was only used ideologically. An ideological importance by no means negates a utilitarian one.

Because metaphor (**glossary**) is important in religion, myth and magic as well as 'profane' ideology, and because the poetic is essential in thought process, metaphor theory is used as an underlying, though not exclusive, principle.

As this thesis uses ideas from several disciplines which are often variously understood in different disciplines, a glossary of key terms is included (**pages 571-585**). The glossary briefly outlines problematic terms and where relevant redirects the reader to more detailed discussions within the thesis. The first mention of any term which appears in the glossary is highlighted in the body of the thesis.

1.1 THE POTENTIAL

This study explores the ideology of flint in Dynastic Egypt, a period of over 3000 years incorporating both the Bronze and Iron Ages, a time of flint decline. The study is unusual in bridging the still deep chasm between archaeology and history, technology and ideology, and for its exploration of Egyptian Dynastic lithics. A long perspective study has the potential to explore the decline of a technology, its effect on society and ideological change. Furthermore, Dynastic Egypt is one of few historical, lithic-using 'complex societies' and it is possible that the information supplied for Egypt could inform studies of other lithic-using societies.

Generally, it is unusual in academic Egyptological circles to consider long timescale changes. There is always the problem with such studies that the results will be sketchy and there is often the danger of using evidence from one period inappropriately in another. There cannot be the detail of understanding resulting from a narrow timescale study. However, longue durée (Braudel 1979) study has advantages. Importantly, it enables the study of changes which may be slow to take effect. One might consider ideology in such terms. Secondly, for a little studied topic, such as the ideology of flint in Egypt, a long diachronic study provides groundwork for future, more detailed explorations.

Traditionally archaeology considers ideology difficult (Hawkes 1954; Binford 1989; Christensen and Warbuton 2002, 165). While Egyptology has made great inroads into the study of ideology, it has done so largely through text and 'art'. The ideology of materials, and particularly of mundane materials has, with few exceptions, been ignored.

Reasons for this relate in part to the perceived dichotomy between technology and ideology. In Egyptology, lithics have traditionally been considered the preserve of the 'technician', of archaeologists concerned with the practical aspects of Egyptian life. Lithics in particular suffer from this as they are considered mundane compared to say coffin fragments or stelae (**glossary**), and are often associated with the non-elite. Ideology has traditionally been studied by Egyptologists through largely elite text. Of course, there are exceptions, and this dichotomy is something of a caricature, but nevertheless one with a nugget of truth.

The study of the technological-ideological over a long timescale is unusual for ancient Egypt, popularly perceived as timeless. As will be shown below, few lithic studies have dealt with ideological change, except perhaps in baldly stating that the flint knife continues in the religious sphere long after it had ceased to be used in the secular.

1.2 DEFINITIONS

The thesis explores the ideology of flint, specifically chronological changes which may be apparent. I use 'ideology' in its broadest sense and include religion, cosmology, myth as well as implicit ideology, which may not be emically (**glossary**) understood. Ideology concerns cerebral rather than physical use, it concerns the way artefacts are thought of, though I do not see ideology and the everyday as totally divorced (for a more detailed definition see **2.2.1**).

The way artefacts are thought of is influenced by: the physical properties of the artefact itself; its life history; its wider physical context. All these factors are mediated by the actors and receivers, the human society. Artefacts communicate largely through analogy, through tropes (**glossary**). One might also add that artefacts communicate through emotion but this is too intangible to measure archaeologically **(2.3.3.3**). The message, which is a result of actor and artefacts, is evidenced through: the salience or disregard for the physical properties of the material; the archaeological context of the artefact; textual information relating to the artefact.

Flint I define as microcrystalline quartz commonly used for the manufacture of knives, sickle blades (**glossary**) and other knapped tools. It includes chert. This definition takes account of the apparent imprecision in ancient Egyptian definitions (**glossary**; **2.3.2.3**). Occasionally rock crystal, chalcedony, obsidian or agate are discussed if relevant to this thesis if they appear to have been used for knapped stone tools. Where they are discussed I do not intend to imply that they are flint and they are referred to by their individual names, i.e. obsidian etc. The exception is when I am dealing with ancient sources. There is some possibility that there was confusion of terms by the ancient Egyptians. By *ds km*, for example, the Egyptians may have meant obsidian rather than black flint, though as discussed in **2.3.2.3**, I believe it is more likely that black flint was meant. Where I discuss modern sources, or material held in museums, I identify that stone by its geological term. That is, I do not refer to obsidian, rock crystal or agate as 'flint' but to only flint and chert as 'flint'.

1.3 PREVIOUS STUDIES ON FLINT IDEOLOGY

1.3.1 GENERAL HISTORY OF EGYPTOLOGICAL LITHIC RESEARCH

There is a general dichotomy within the study of Egyptology, whereby Prehistory tends to be the preserve of the archaeologist (naturally) and historic Egyptology the preserve of the historian (less justifiably). Therefore, while Predynastic lithics are gradually becoming an acceptable area of Egyptological research, Dynastic lithics have not yet achieved the same level of interest. One of the first to study Predynastic lithics was Pitt Rivers (1882) and since then the subject has gained respectability (see Holmes 1989 with references). However, even for Prehistory, interest in ideology is limited.

The idea that the Dynastic Period and lithics are unsuitable bedfellows has not always been prominent. The study of Dynastic lithics began admirably but then flagged under the weight of a discipline increasingly concerned with text and architecture. The first serious study of lithics in Dynastic Egypt was conducted by Flinders Petrie's lithic expert Flaxman Charles John Spurrell[1], who not only sorted artefacts according to typologies but carried out refitting experiments, experimental archaeology and micro-wear analysis (Petrie 1891, 12, 51–56; 1894, 37–38). In the 1880s and 1890s Petrie used Spurrell's expertise to enhance his understanding of

[1] Spurrell, had published extensively for the Kent Archaeological Society and elsewhere prior to his work with Petrie.

Egyptian sites (Petrie 1891, 12, 51–56; 1894, 37–38; 1900b, 10, 22, 65 pl. 20; 1902b, 8–12, 24, figs. 28–26, 51; 1920, 21, figs. 32. 34, 47).

Ideological implications of flint were considered by others. A passage from Findlay (1894, 228–229) perfectly summarises the three common contemporary views: Egyptian lithics were accepted by some as evidence of a Stone Age; many Egyptologists, however, preferred to see them as natural products; Auguste Mariette (an Egyptologist) gave a third view, that the flints were manufactured in historical times as they are often found in Theban tombs. Partly based on the writings of Herodotus, who discusses use of Ethiopian stone for embalming and circumcision (**6.7.1.1** and **6.7.1.2**), Findlay believed lithics were used for sacred purposes. As few flints were found in settlements it was concluded that their ceremonial purpose was a survival from earlier times, a 'superstition' as John Lubbock (Findlay 1894, 229) described it. Findlay's viewpoint survives in the literature of today.

Exploration of the form and kinetic (**glossary**) function of Egyptian Dynastic lithics continued. Seton-Karr discovered and published the Dynastic flint mines of Wadi el-Sheik (**maps 1 and 5**; Seton-Karr 1904) and discussed New Kingdom use of flint picks (Seton-Karr 1905). Currelly (1913) lists stone tools in the Cairo Museum although there is no attempt to explain or typologise them. Caton-Thompson and Gardiner (1934) and Emery and Saad (1938) discuss flint tools found on their excavations.

The idea that flints were largely confined to the ceremonial persisted. Reisner (1931, 231) describes flints at the Giza (**map 4**) temples of Mycerinus: 'Thus flints like the stone vessels are impractical ceremonial-traditional objects, made only for the tomb, by craftsmen practising a dead art'. Harris (1961, 139) also expresses the view that later flint-use was purely ritual. This view is perhaps partly a reflection of 20th century archaeologists' belief in progress and archaeologists' assumptions that new materials, such as metal, were superior.

After the 1930s, interest in Egyptian lithics waned. This can be explained by the increasing specialisation of Egyptology, its increasing distance from archaeology. Work concerning lithic ideology was largely confined to Old–Middle Kingdom ritual butchery knives, especially in regard to their depictions on tomb walls (Eggebrecht 1973).

More recent excavations, particularly those of German teams, incorporate lithics into excavation reports and some specific tool classes have been studied diachronically. These reports differ from earlier ones in dealing largely with settlement

sites and include debitage as well as finished tools. e.g. Ginter *et al.* (1980, 166); Holmes (1992).

However, even in the late 1980s, it was still unusual for Egyptologists to take the study of lithics seriously. Conard (2000, 24) describes the 1988/89 season at Giza (**map 4**) 'Although most of the workmen had much field experience, few had been asked previously to recover all classes of lithic artefacts.'

Generally, there was little attempt to understand lithic technology and its relationship with Egyptian society, and to compare ancient texts with archaeological findings. This approach is certainly not confined to Egyptology (e.g. Goring-Morris and Belfer-Cohen 2001, 257 state that this is also a problem with Levantine lithic research).

While flint is now studied in Egyptology, it is still unusual, compared to say pottery studies. This is shown by the fact that while flint is included in excavation reports, unlike some other classes of material, it rarely receives enough interest to be published in its own right (there are published works on Egyptian pottery in general but those for Dynastic flint are largely hidden in site reports). As an example of the lack of interest in flint, the *British Museum Dictionary of Ancient Egypt* (Shaw and Nicholson 1995), a useful and authoritative reference work for students of ancient Egypt, contains sections on pottery, on copper, on iron, but not on flint.

I summarise the main works on flint firstly by period (though there is some overlap) and then diachronic studies considering tool class or sites. My typology (**Appendix 1**) mentions additional, less extensive studies, where relevant.

1.3.1.1 PREDYNASTIC – OLD KINGDOM

Lithics from the following areas have been studied: the temple complex at Hierakonpolis (**maps 2, 6 and 8**) including flint working debris from manufacture of bifacial knives (Holmes 1992); the Old Kingdom delta site of Kom el-Hisn (**maps 3 and 4**; Wenke *et al.* 1988; Cagle 2003, 118–121); flint knives from Abusir (**map 4**; Vachala and Svoboda 1989); the nature of the latter in relation to ritual butchery and Old Kingdom tombs scenes (Verner 1986); chopping tools, flakes, knives and sickles from Predynastic–Dynastic Qasr el-Sagh (**maps 1, 4 and 5**; Ginter *et al.* 1980); Early Dynastic implements in the British Museum (Spencer 1980); Predynastic–Old Kingdom flints from Tell el-Faraʿin (Buto) (**map 4**; Schmidt 1989b); Predynastic–Old Kingdom flint from the Temple of Satet, Elephantine (**map 8**; Dreyer 1976; 1986, 87–88, 96–97, 136, 153, pl. 45); material from the town of Old Kingdom Elephantine

(Hikade 2002); Old Kingdom to First Intermediate Period ʿAyn-Asīl (**map 3**; Midant-Reynes 1983; 1998); Old Kingdom lithics from Tell Ibrahim Awad (**map 4**; Schmidt 1992). Pawlik (2005) has produced an interim report on the largely Old Kingdom site of Kom el-Ahmar (**maps 2, 6 and 8**). This also includes some Early Dynastic and Middle Kingdom material. Giza (**map 4**) lithics have been published by Kromer (1978) Conard (2000); Werschkun (2007a and 2007b).

1.3.1.2 MIDDLE KINGDOM

Ginter (1980) studied chopping tools, flakes, knives and some sickles. Several sites have been published including: Wadi el-Sheik (**maps 1 and 5**; Weisgerber 1982; 1987); Timna (**map 3**; Rothenberg 1988); weapons from the Egyptian fort at Mirgissa (**maps 2 and 9**; Vila 1970); material from the sacred lake at Karnak (**map 7**; Debeno 1984). Tillmann's (1992) in-depth study of the material from 12th–19th Dynasty Tell el-Dabʿa (**map 4**) is much quoted in this thesis.

1.3.1.3 NEW KINGDOM

New Kingdom published site material includes those from: Karnak (**map 7**) and the workmen's village at Amarna (**maps 3 and 5**; Miller 1985, 1987a and b); Panhesy material at Amarna (Graves-Brown 2009); Qantir/Piramesse (**maps 3 and 4**; Tillmann 1986; 1992). Debeno (1971) examined flint found in the Theban Valley and (1994) discussed tools from the Ramesseum workshop, and in particular the six crescent shaped drill bits. Giddy (1999) reported some 588 flint tools out of a total c.2000 artefacts from the New Kingdom and later site of Kôm Rabîʿa, Memphis (**maps 3 and 4**). Only details of the retouched flints were published.

The Egyptian garrison of Beth Shan in Israel produced a number of lithics, of which mainly sickle blades (**glossary**) were recorded (James and McGovern 1993, I and II). These seem to correspond to a New Kingdom date. Tillmann (2004) divides 19th Dynasty– Second Intermediate Period sickle blades from Tell el-Dabʿa (**map 4**) into 4 types.

1.3.1.4 POST NEW KINGDOM

As stated above, Giddy (1999) discusses the New Kingdom and later material from Kôm Rabîʿa, Memphis. Other post-New Kingdom discussion of flint is rare and relates to individual finds within reports. For example, a Third Intermediate Period knife from

el-Ashmunein (**maps 3 and 5**; Spencer 1993, 31, 33, pl. 27, pl. 29). Balfour (1897) and Hickman (1959) describe 26th Dynasty arrows, now in the Pitt Rivers Museum.

1.3.1.5 DIACHRONIC STUDIES BY TOOL CLASS, ETC.

Miller (1985) discusses the lithic assemblage at Karnak (**map 7**) from Middle Kingdom to Saite-Ptolemaic times in relation to social changes. Absence of cores, etc. suggests roughing out was carried out elsewhere. Butchery knives and items for lapidary work seem especially prominent in the New Kingdom, borers and rough flakes more common in the Saite Period. Imported obsidian (**glossary**) is observed later. Giddy (1999) looked at the extensive flint group from Memphis. Weisberger (1987) surveyed flint mines at Wadi el-Sheik (**maps 1 and 5**) showing the mines to be associated with Middle Kingdom material although it is probable they were used over a much longer time scale.

There have also been typologising diachronic studies on specific tool classes: Predynastic and Dynastic arrows and arrowheads, within a general study of African arrowheads (Clark *et al*. 1974); Late Palaeolithic- Late Dynastic arrowheads (Hikade 2001); the *psš-kf* (**glossary**; van Walsem 1978–1979; Roth 1992; Hikade 2003); Early Dynastic and Old Kingdom flint knives (Eggebrecht 1973); Chalcolithic and Early Bronze Age scrapers using recently excavated stratified material from Maadi (**map 4**), Hierakonpolis (**maps 2, 6 and 8**), Giza, ʿAyn-Asīl (**map 3**), Tell Ibrahim Awad (**map 4**), Abydos (**map 4**) and Elephantine (**map 8**; Hikade 2004).

Work has also been carried out on manufacturing methods for ripple-flaked knives (Bradley 1972; Midant-Reynes and Tixier 1981; Midant-Reynes 1987; Kelterborn 1984) and fishtailed-knives (Bradley 1972; Casini 1974).

Miller (1989, 252–253) uses archaeology and literature to discuss the possibility that the flint knife was used in surgery. Devaux (2000) and Stocks (1988; 2003, 74–99) explore cutting of hard stones with flint: Devaux, using evidence of partly finished artefacts, and Stocks, as part of a wider experimental study.

Most of the work listed above deals with the artefacts themselves, typologising and suggesting functions. As is clear from my typology (**Appendix 1**), there are more types than usually identified. It is to specific works on ideology of flint that I now turn, some of which have been cited above.

1.3.2 PREVIOUS WORK ON EGYPTIAN FLINT IDEOLOGY

A handful of scholars have explored ideology of flint as a material, rather than ideology of particular tool types. It will be seen from the citations, including page numbers, that the literature here is not extensive, though it touches briefly on several areas which I examine in **Chapter 6**.

Using text, Wainwright (1932a and b, 1963) explored the link between flint, Seth (**glossary**), storms and meteoric iron. Harris (1961, 138–139, 228–229, 233) briefly explored textual ramifications of flint, bringing out its role in religious life. Midant-Reynes (1981) studied words for flint in ancient Egyptian, highlighting mythical use of the material and explored (Midant-Reynes 1987) possible meaning behind Predynastic knives, and in particular the duality apparent in manufacture of the ripple-flaked pieces (see also Vertesalji 1996 for work on Predynastic ripple-flaked knives). Aufrère (1983; 1991 II, 563–569), using text, explored how minerals were understood in terms of deities and cosmologies. As his work is concerned with the whole mineral world, information relating to flint is briefly presented (Aufrère 1991 II, 563–569), but has been invaluable as a starting point for this thesis. Ritner (1993, 163 footnote 758) suggests that the *ds* knife, traditionally of flint, had a sacred purpose for use against the enemies of Re (**glossary**).

Particular tool forms have also been studied. A summary of the work surrounding the *psš-kf* are found in Hikade (2003) who employs archaeological, ethnographic and textual evidence. Various writers have made a connection between Early Dynastic–Old Kingdom flint knives and funerary cults largely using iconography and archaeological artefacts (Montet 1910; Needler 1956; Eggebrecht 1973; Vachala and Svoboda 1989) though they generally go no further than restating the presence of flint in ritual butchery. Vila (1963; 1973, 638), however, tentatively suggests use of a flint knife, at least metaphorically, in a Middle Kingdom human sacrifice and Ritner (1993, 163 footnote 758), using extensive textual evidence for flint in execration rites, strongly supports the idea that the knife may have been used kinetically in human sacrifice. Hikade (1997) examines the oversize Second Dynasty ripple-flaked knife from Abydos (**map 4**) suggesting that it was handed down through generations. Hendrickx *et al.* (1997–1998) published a study of Predynastic–Early Dynastic flint animal shapes concluding, from archaeological context, that some are politico-religious, others apotropaic and others offerings. Finally, certain writers have described naturally shaped stones selected and painted by the Egyptians at Deir el-Medina (**map 7**; Bruyère 1933, 60; 1934, 69–70; 1939, 144, 276–7, 199–200; Keimer 1940; 1945;

Reeves 2003) stating these probably had religious significance, though the nature of that significance is largely unexplored. The bifacial flint knife is probably the most extensively studied but, beyond the stated belief that it was used for butchery, its specific meaning is not considered.

There have been attempts to prove or disprove the sacred nature of bifacial knives through associating them with either the sacred or profane (discussed in more detail in **5.2.1**). This Durkheimian division is usually tested by examining find contexts, whether or not flints are associated with temple or burial or domestic sites (Spurrell 1891, 51; Kromer 1978; Schmidt 1992). In these studies there is little recognition that the sacred and profane may not have been considered quite so incompatible in ancient Egypt. An attempt to clarify the difficulties of separating the sacred from the profane has very recently been begun by Shirai (2005).

While not dealing with the Dynastic period, Shirai (2005) explores the emergence of bifacial technology in the Neolithic Fayum (**maps, 1, 3, 4, and 5**) and suggests, following Sinclair (1995; 2000), that bifaces (**glossary**) incorporated social meanings important to socio-economic development. Ethnographic parallels are drawn with Kalahari Bushmen and Innuit hunters to suggest that the Fayum tools may also embody such traits as competitive aestheticism, though the author does state in his conclusions that 'It may not always be possible to discover the intentions of the Neolithic toolmakers' (Shirai 2005, 144).

Finally, there has been work on the ideological properties of stone in general in ancient Egypt (Martin 1986, 873–875; Ogdon 1990; Wilkinson 1999, 100–101), concluding that stones' qualities of durability suggests links with the primeval, the perfect time of the gods and the longed for human eternal life.

Thus, exploration of the ideology of flint in ancient Egypt is largely restricted to the Early Dynastic and Predynastic. Where it deals with Dynastic material from the Old Kingdom onwards it mainly uses textual material.

An overview of previous literature considering the decline of flint is given in **Chapter 3**. It will be shown that there has been no systematic measure of flint decline in Egypt. As far as I am aware, there has been no specific work on Egyptian ideology using metaphor theory (**glossary** and **2.2.2**) in relation to artefacts, though it has been used for text (**2.2.2.1**).

1.3.2.1 SUMMARY OF RECENT EGYPTOLOGICAL IDEAS ON FLINT IDEOLOGY

Two implements, the *pšs-kf* and the bifacial flint knife are commonly considered ideologically salient. The *pšs-kf* is largely confined to the Early Dynastic and used in the "opening of the mouth" ceremony (**glossary**). It is usually thought that the flint knife was particularly important in ritual and cattle butchery and continued in the realm of the religious after ceasing to be used in secular contexts (Garstang 1907, 107; Eggebrecht 1973, 115; Wilkinson 1992, 189). The question is not discussed anywhere in detail but mentioned as part of other studies. Ikram (1995, 69–70), in a discussion of the role of meat in ancient Egypt, however, questions this belief. She points out that in the New Kingdom metal is certainly used in religious ritual and flint continues in the domestic sphere.

Flint is often cited as having been used in embalming, and occasionally said to have been used for circumcision. Excepting Graves-Brown (2006), the evidence has not been extensively discussed.

The work of Aufrère (1981; 1991 II, 563–569) has drawn a connection between flint and fire, and flint and specific deities.

There remains a need for an in-depth diachronic study of the ideology of flint, which is what I offer in this thesis.

1.3.3 NON-EGYPTOLOGICAL WORK ON FLINT IDEOLOGY

An examination of non-Egyptological work on flint ideology may suggest possible means of exploring the subject for Egypt. Such work is here summarised and its pertinence to this thesis briefly discussed.

Sackett (1982) and Close (1977, 1978, 1989) explore style (**glossary**) in relation to flint. Building on Wobst (1977), there have been attempts to use style, not only to differentiate groups but as a key to metaphoric thought[2]. Conkey and Hastorf (1990), also see style as ideas and perceptions. Style has sometimes been defined as arbitrary standardisation of tools and linked with metaphoric thought (often termed 'symbolic' by scholars e.g. Holloway 1969; Gowlett 1984 for handaxes; see Chase 1991 for references). The fallacy here is that not all style is deliberately metaphoric/symbolic (**2.3.1.1**).

[2] The differences between isochrestic and iconic style and their value for and study of the ideology of lithics are discussed in **Chapter 2**, also see **glossary**.

It could be argued that where style is largely defined as a marker of social grouping (e.g. Close 1977, 1978), it implies an ideological facet. Burke (1999) makes much of the connection between ideology, style and social groups. Her appropriation of style in studying ideology is suited to her more limited definition of ideology. For this thesis, the idea of style is useful but limiting. Style tends to relate to the form of an object. Here my concern is, not simply with surface decoration and form, but also biography and physicality. Nevertheless, as will be discussed in **Chapter 2**, ideas of style are useful. Thus, while the analysis of style is not the underlying methodology of this thesis, it is used.

Gero's (1989) work is included in **Chapter 4**, and proves a useful starting point for a discussion of the physical properties on which metaphors relating to flint may be built. Gero suggests certain universal traits relevant for all material objects that are particularly useful in transmitting social information, measuring these against a lithic assemblage from the Peruvian early ceramics periods. She explores five traits:

- Rarity of raw material
- Artefact size
- Artefact longevity
- Number of production stages
- Restrictiveness of production

Her database assemblages are largely considered divorced from detailed archaeological context. The general results showed that flake tools showed little promise for encoding social information, while bifaces appeared to hold more potential.

Gero's work uses artefacts as the basis of study and the starting point from which social information may be transmitted. She sees objects as 'active', a trait usually associated with post-processualists (Boiven 2004, 63). Naturally, given its date, there are some problems with her thesis. Axes of variability only show possibilities not inevitabilities; the relationship between an artefact and its environment is described as a one way transmission of messages. Probably because of the way in which she saw a simple transmission of message and did not recognise the importance of the social or archaeological context, Gero tended to use simple quantitative counts of data from artefacts to test her hypothesis. Although her work had post-processualist elements, and post-processualism is sometimes contrasted with functionalism, she also employed functionalist principles, seeing particular traits as linked to particular functions. This functionalist approach could now be described as narrow and simplistic. Finally, she did not consider that variation in tools may also be due to

factors such as types, other than rarity, of raw material available, availability of other materials, etc. Nevertheless, there is much that is useful in her work. One of the beauties of her theory is that it starts with measurable archaeological factors.

Sievert (1992) considers Maya ceremonial lithic tools using contextual archaeology, trace wear analysis, Maya text, and ethnographic information. Tools are examined for possibilities that they were used in ceremonial performance such as bloodletting and killing. This study produces a detailed description of lithic use in Maya ceremony. There is little discussion of the nature, or definition, of ceremonial practice. The study is largely ahistorical and is supported by the ample textual evidence dealing directly with lithics. Sievert considers traits exhibited by tools such as formality, local or exotic stone, etc. in relation to their selection for ceremonies. Unfortunately, for Egypt the textual evidence is not as extensive, nor always directly related to ceremony. Additionally, use wear analysis was not possible with the material available and has not been extensively carried out in Egyptology. However, sections on physical characteristics of tools and their relation to use in ceremony, or otherwise, is particularly pertinent for my section on the physicality of flint (**Chapter 4**).

Sinclair's work (1995) provides several points relevant to this thesis, but is not suitable as an exhaustive model for ancient Egypt. Sinclair considers bifacial Solutrean tools and, on the basis of their high production 'cost' relative to potential utilitarian use, suggests they were symbolically[3] important. Using ethnographic parallels of modern hunter-gatherers, he suggests that the required lithic manufacturing skill reflects required hunting and gathering skill. While the general idea that high manufacturing cost may suggest symbolic use, the details of his analysis cannot be used as a model for ancient Egypt. Ancient Egyptian lithic technologies belonged to a complex society with defined specialisations. This means skill in one area, say lithics, is unlikely to have been understood in all other specialised areas. More generally, the ideology of a complex society may be very different from that of hunter gatherers. Egypt also, of course, has the advantage of text, which would help elucidate the ideology. Finally, one would expect the nature of the ideology of flint to alter through time; thus one model may not be enough adequately to explain the ideology of the material.

Goring-Morris and Belfer-Cohen (2001) have suggested that the symbolic qualities of lithic tools may be at least partly elucidated by ethnographic analysis and through a contextual analysis of flint spatially and with regard to other materials. Their

[3] He uses the term 'symbol' though I would use 'metaphor' (**glossary**).

suggestions are sketchy, though suggestions of ethnographic analogy and contextual analysis are employed in this thesis.

The above approaches all integrate notions of symbolism/metaphor, either explicitly or implicitly. Symbolism/metaphor would thus appear to be a potentially fruitful approach. However, there are problems. In **Chapter 2**, I consider the approach of metaphor theory, not previously applied to Egyptian artefacts or to lithics generally.

1.4 RESEARCH QUESTIONS

The above shows that the ideology of flint in Dynastic Egypt has been little studied. The overriding research question is thus to establish a foundation:

1. What are the ideological components of flint in Dynastic Egypt?

Previous studies do not seek chronological changes in ideology beyond the suggestion that the flint knife was increasingly confined to the ritual realm. Since we are dealing with over 3000 years of history and since the period is one in which flint use was in decline (the period covers the Egyptian Bronze and Iron ages) it would seem pertinent to study chronological variation. My second question is therefore:

2. Does the ideology of flint change through time?

The obvious answer would be that any change in the ideology of flint is related to the decline of flint and increase in metal use. The third research question is therefore:

3. How, if at all, does change in the ideology of flint relate to the decline of flint and increase in metal use?

There is a problem however, that the decline of flint is poorly understood. Furthermore, means to measure decline are not readily available in published literature. These problems are addressed in **Chapter 3**.

In the search for a means of studying ideology, as stated above, several approaches have some value. However they do not provide a suitable meta-theme with which to bring together and explore all aspects of ideology and do not fully attempt to explain change. Metaphor theory, for reasons explained in **Chapter 2**, is a potentially fruitful way forward. Briefly, metaphor theory is akin to theories of symbolism but suggests a more multivocal (**glossary**) approach to artefact signification. Furthermore, linguistically derived theories of metaphor development could be applied to artefacts. As explained in **Chapter 2** (see also **glossary)**, I use the term ‘metaphor theory’ loosely. The aim of the thesis is not to develop a rigourous testing of the theory, but rather it is intended as a tool to uncover the ideology of flint.

Thus, in expanding the research question to consider ideological change and its relation to flint decline and increase in metal, the following subordinate questions may be asked:

3.a. Do the metaphoric variations relate to the degree to which flint was embedded in society?

3.b. Does tropic use relate to utilitarian use (is the metaphoric use in anyway related to the utilitarian or is it a separate construct)?

3.c. Is there any evidence of a move from implicit to explicit ideology (dead to 'live' metaphors), or vice versa?

I do not expect to find evidence of clear causal relationships, but rather information to suggest that there may be some connection between flint's decline and its ideology. One may expect to find a clear change in ideology as flint ceases to be commonplace. It is possible too that its ideological or tropic use would be shown to relate directly to its utilitarian use. For example, the ideological connection between flint and fire might only coincide with a timescale when flint could be shown to be used in fire production. Additionally, by considering ideological use of flint cross-culturally it may be possible to ascertain which factors seem likely to relate to the common physicality of flint. Finally, one might expect that as flint became less commonplace, its ideological use became more explicit (**2.2.2.6**). In a society where flint is commonplace it could be that it is taken for granted and any ideology surrounding it is implicit.

1.5 METHODOLOGICAL OUTLINE

Three types of evidence are considered:

- The physical properties of flint and their technological factors (i.e. largely uncontextualised, archaeological information).
- The contextual properties of flint.
- The textual evidence.

Sources of evidence are:

- Flint from British museums, largely unpublished.
- Published archaeological flint.
- Egyptian text, largely published, relating to flint.

The relative merits and problems with evidence is discussed in detail in the relevant chapters and in part outlined below.

Briefly, the method is as follows: In the three areas of the archaeologically decontextualised, archaeologically contextualised and textual I shall:

1. Look for metaphoric connections.
2. Examine chronological changes and whether these correlate with flint decline.

Possible metaphoric connections are obviously numerous. They are sought in repeated patterns of connection between different arenas not normally connected. Ethnographic parallels are also used to consider possible areas of metaphorical density which are then tested against the evidence. There are problems in using ethnographic analysis (**2.2.2.8** and **2.2.2.9**). Gricean Pragmatics (**glossary** and **2.2.2.8**), loosely defined, is used to test whether or not possible connections make sense as metaphors.

Once metaphors are recognised an attempt is made to explain them. This is done partly by exploring the wider social pattern in Egypt. Recourse is also made to ethnographic parallels.

Question 2 relates to flint decline. As it is my contention that this has not been fully studied I have chosen to measure flint decline through: a) observation based on familiarity of the material b) measurements of actual flint numbers c) a qualitative assessment of skill d) a quantitative analysis of variability through a decline in typological range e) and increase in expedient (**glossary**) tool use f) micro-wear analysis carried out by others.

It is my belief that consideration of actual material from British museums, though not without its problems, will be particularly beneficial in studying flint decline. However, published archaeological information on Egyptian flint is also considered.

The problems with the various sources of evidence can be briefly outlined as follows:

The specific problems relating to the material held in British museums are discussed in **3.2**. Briefly, both the flint in British museums and flint in published sources are subject to the bias of Egyptological interest. Most excavated material, published and in museums, is funerary and elite. It is further filtered by the interests of

excavators, museums and publishers. Thus, debitage rarely appears in either museums or published sources.

Regarding published archaeological information on flint, there is not always sufficient evidence to discuss skill and that evidence is often decontextualised. As for information on the texts, as stated above, this has received more attention from Egyptologists in the past, and thus one could argue that it is better understood.

It is notable that textual and archaeological information is rarely brought together.

In **2.3**, I discuss the relative uses to which both can be used to identify ideology.

1.6 CONCLUSION

This thesis explores a web of interconnected ideas surrounding flint. It will show just how complex that web is. 'The great excitement of archaeology, and why it is worthwhile pursuing is no longer that of discovery. It is an intellectual networking of potential connections between things, in time and in space, to make sense of the past. Exploring these connections involves emplotment, metaphor and metonym, creating a story and unravelling the potential meanings of artefacts by tracing their relationship to others' (Tilley 1999, 4).

2. UNDERPINNING PHILOSOPHY AND EVIDENCE TYPES: IDEOLOGY, METAPHOR, TEXT AND ARCHAEOLOGY

2.1 INTRODUCTION

The first part of this chapter (**2.2**) explains the definition of ideology employed in this thesis, why the term 'ideology' is used and why metaphor theory is an apt framing conception. The second part (**2.3**) briefly considers differences between text and non-text as evidence for metaphoric understanding of flint and whether a comparison of the two may have implications for understanding flint's ideology. Both discussions on the nature of ideology and on differences between text and non-text are well-trodden in the social sciences (for ideology, see Eagleton 1991 with references; for text/non-text, see Moreland 2003 and other references given below). As I wish to use the bulk of the thesis to explore ideology of flint, something certainly not well-trodden, discussion of definitions is limited to areas vital in understanding this thesis.

2.2 DEFINING IDEOLOGY, USING METAPHOR

2.2.1 DEFINING IDEOLOGY

'Ideology' can be variously defined (Burke 1999, 11–25 with references), but is seldom explicitly defined in Egyptology. In this thesis the term 'ideology' is a very broad concept; it concerns thought and perception rather than kinetic use; relates to the sublime; and to shared ideas which have duration. It incorporates terms such as religion and cosmology.

For this thesis, ideology is not the Marxist idea of false consciousness (**glossary**; Burke 1999, 11), nor a means by which one group controls another (see Giddens 1979, 179–195; Shanks and Tilley 1982; Shennan 1982 for discussions and further references). Ideology is not an entirely elite construction ('the dominant ideology thesis'; Abercrombie *et al.* 1980; 1992) and, connected to this, it is not present in text and absent from archaeology (sometimes suggested in Egyptology – see Smith 2003, S.T. 168–170 with references). It is a mistake to understand all ideological societies as masses duped by a minority and one could argue that some ideologies even see relinquishment of power as the ideal. Furthermore, different groups within a society may have different ideologies.

In this thesis ideology incorporates:

1. A sense of the sublime other, though not necessarily gods
2. A *shared* belief system; thus archaeological evidence for ideology must not be geographically or culturally restricted
3. A continuum with the secular
4. Duration and embeddeness (Hodder 1992, 208)
5. Use of the metaphoric

Sublimation is discussed in **2.2.2.5**; point three in **2.2.1.1** and point 5 is dealt with separately below in terms of metaphor. As for point 2, ideology is a shared belief system (Durkheim 1965, 41), therefore evident over a sizable geographical area. Related to this, various scholars have suggested that traits of symbolic (ideological or metaphoric[4]) style will differ from isochrestic style (**glossary**; **2.3.1.1**) in fall off rate[5]. However, there are problems. Ideologies vary in geographical coverage and in early developmental stages must be geographically limited. Additionally, one ideology may manifest differently in different regions.

2.2.1.1 RELIGION AND RITUAL

Religion and rituals are both subsets of ideology, though ideology could exist without either. For the purpose of this thesis religion concerns deities. While religion (and thus ideology) and the secular are often seen as a duality (Durkheim 1965), for many societies religion is embedded in the everyday, thus religion and the secular are actually a continuum (Leach 1954, 12–13; Renfrew 1994, 47). For Egypt, religion was not bounded (Baines 1984, 36), and for the Egyptians, acts usually considered 'secular' today, such as organising an expedition, were ritual activities (**2.2.1.1**). So, explorations of Egyptian ideology should include the domestic, landscape, technology, etc. as well as the traditional areas of temple and tomb. There are problems with this ideal (**5.2**; **5.3**).

Ritual is sometimes seen as a form of ideology (Shanks and Tilley 1982, 133; Barth 1987, 9), but it is rather a manifestation of it. The problem then is to identify ritual, whether in secular or religious contexts.

[4] These scholars tend to use the term 'symbolic' or 'ideological' rather than 'metaphoric'.
[5] Style is here defined as a polythetic set of similar artefact attributes, not kinetically necessary. From a more detailed description see section 2. There are alternative meanings to 'style' for which see Conkey and Hastorf (1990). For isochrestic style see Sackett (1982, 1985, 1986).

Bell (1997) explores anthropological indicators of ritual. Various scholars list archaeological indicators (Renfrew 1985, 11–26; 1994, 51–52; Renfrew and Bahn 1991, 359–60; Whitehouse 1996). For historical societies one might also consider if those societies recognised a term approximating to our idea of ritual.

In this thesis I use Bell's (1997) indicators of ritual cited by Verhoeven (2002, 31) and Insoll (2004, 11) but also include the aspect of 'oddness' which I discuss in **2.2.1.2**. Bell's list includes:

- Formalisation
- Traditionalism
- Invariance and repetition
- Rule-governance
- Sacral symbolism (I would use the term 'metaphor', but 'symbol' is a traditionally used term here)
- Performance

Of the list, sacral symbolism (the sublime and symbolic) is particularly important and discussion of tropes is especially pertinent to this thesis (**below**). Invariance and repetition make ritual easier to identify archaeologically. Performance distinguishes ritual from belief. It demands shared social meanings. One might question the requirement of traditionalism. Grimes (2000, 11–12) discusses new rituals. While these may adopt elements of known rituals, they may be considered new because they are purposefully created to meet new needs.

Symbolism/metaphor[6] is sometimes equated with ritual. But, while ritual equates with symbolism, symbolism is found outside ritual (Garwood *et al*. 1991, viii). Ritual, unlike symbolism, demands action and repeated performance. Some scholars claim that ritual symbolism must be explicit, emically understood (Eyre 2002, 142), while others disagree (e.g. Gell 1975, 211). It is my contention that not all ritual is explicitly symbolic. For medieval monks, performance of rites was not for their symbolic meaning. The practice itself was essential (Asad 1993). For the practitioner, Egyptian ritual was not make-believe or emblematic but very real (Meskell 2005). Statues of gods were not mere symbols or metaphors, but actual divine bodies. Nevertheless, to the outsider, ritual acts appear highly symbolic/metaphoric.

[6] Most authors use the term 'symbolic', perhaps because much religious metaphor is univocal and explicit (see **glossary**).

Secular ritual is increasingly studied (Laneri 2007, 2 with references). Bourdieu (1977, 114–116) distinguishes between ritual and domestic symbolism[7]. While both share similar symbols and general explanatory schemes, for Bourdieu ritual is a conscious social act of manipulating symbols to make a religious statement, a statement involving the transcendental; whereas in the domestic sphere use of symbols may be implicit or explicit, it is not consciously employed to manipulate the transcendental, though may still refer to it.

Related to the problem of etic definitions is that of multivocality. Symbolism used in ritual is not necessarily intentionally communicative (Skeates 1991, 122). It is multivocal, but that it cannot be fully explained does not matter to the performers. It may even be used intentionally to confuse. Bourdieu (1977, 116) thus eschews linguistic descriptions such as use of the terms 'metaphor', 'metonym', and 'analogy' in describing the operations of ritual practice. He also sees metaphor in ritual as less explicit than linguistic metaphor.

Bell (1992, 29) expresses concern that in seeking to define ritual, we look for something specific to certain cultures and apply the term etically. Nevertheless, categorisation is useful to academic understanding (Bell 1992, 266–267). An etic analysis may be justified (Verhoeven 2002, 30); it is necessary, as one cannot enter the minds of past people (Tilley 1999, 261). 'Natives' acceptance or rejection of rationales for their symbolic behaviour constitutes neither proof nor disproof of analyses that must be judged on their ability to reveal meaningful patterning and coherence in superficially disparate observations' (David *et al*. 1988, 366). Furthermore, stylistic patterns, including those indicating ritual, are clearer to an observer than a participant (Roe 1995). Finally, the only way to gain understanding of many seemingly illogical acts is through examining them as metaphors, etically. Finally, for Egypt at least, there appears some correspondence between etic and emic definitions of ritual.

Routledge (2001) deals with emic definitions of ritual. She defines two ancient Egyptian words as corresponding closely, though not exactly, to our term 'ritual': *ỉr-ḫt* and *nt-ḥ*. The first can be loosely translated as 'performing rites' the second as 'ritual'. The first term is associated with maintaining cosmic order and includes activities which we might consider 'work' such as expeditions, building a chapel or 'performing the actions of a military leader'. The Egyptians did not differentiate between sacred and secular ritual (Routledge 2001, 99). Ritual also includes performing the "opening of the mouth" ceremony, giving of offerings, repelling of Apophis (**glossary**), and

[7] As he is very specific about terms I have kept to his useage 'symbolism'.

other cultic and funerary activities frequently executed by the lector priest. The actual doing is emphasised. From this, Routledge categorises the following as important to Egyptian 'ritual': performance and the physical nature of activities; formality in that performers must be educated and written text is frequently employed; repetition; ritual order; a connection with the divine; traditionalism, which particularly involved a notion of a return to primeval time. This coincides with Bell's (1997) indicators of: formalism, traditionalism, invariance, rules, sacral symbolism and performance. It is enlightening and heartening to find certain areas, such as the repelling of Apophis and the "opening of the mouth" ceremony, described as at least closely equivalent to 'ritual' as these are areas which through etic examination would appear to involve metaphor and flint (**Chapter 6**). Additionally, in at least one instance ritual slaughter is described as *ỉr-ḫt* (Routledge 2001, 99). Unsurprisingly, acts associated with the gods were also 'ritual' (Routledge 2001, 312–313). The emphasis on the primeval in Egyptian ideas of 'ritual' is pertinent to this study (**4.2.4**). This loose agreement between modern understanding of 'ritual' and *ỉr-ḫt* and *nt-ꜥ* mitigates the problem of inappropriately applying modern concepts to the past.

2.2.1.2 UTILITY AND IDEOLOGY

Unfortunately the word 'ritual' is often considered a joke in archaeology (Whitehouse 1996; Verhoeven 2002, 6), serving as a 'rubbish bin' for that which cannot be otherwise explained. However, this categorisation has some merit because ritual is 'odd' and kinetically often 'useless'. Thus, as well as Bell's list of indicators of ritual, I also employ the 'oddness' of ritual in its identification.

Ritual:

- Takes place in the domestic or sacred but it is special, sublimated, and thus 'odd'
- Is not etically kinetically utilitarian, thus is difficult to understand
- Makes no 'literal' sense, but makes sense metaphorically

The idea of sublimation was introduced above, and is discussed in more detail in **2.2.2.5**. Ritual imbues normal lived experience with something more charged with emotion and frequently concerns the numinous. Bell (1997, 159) defines sacral symbolism, an area she sees as crucial to ritual, as a reference to a higher, greater or universal reality, the sublimated. Such areas are, of their nature, difficult to explain and

therefore archaeological evidence for them may well reside in the otherwise inexplicable.

Etically, ritual is not kinetically utilitarian, a common observation in prehistoric archaeology (e.g. Goring-Morris and Belfer-Cohen 2001, 260 with references). Leroi-Gourhan (1964, 5) sees religion as that which 'could not be explained by needs of material survival.' By kinetically utilitarian I mean having the function of physically affecting another physical entity.

There are of course problems in linking the non-utilitarian with ritual/religion/ideology. A thing may be have both practical and metaphoric use; use may be context dependent; artefact-use changes diachronically; and the same artefacts, within the same environments at the same time, may have different use according to the sub-cultures of the users (Barth 1987). Finally, isochrestic style may also be non-utilitarian (**2.3.1.1**), for example where it relates to learnt, non-symbolic manufacturing methods.

Future sections and chapters illustrate the importance of identifying the non-utilitarian. Gricean Pragmatics (**2.2.2.8**) may be used loosely to help identify metaphor and relies partly on identifying the 'out of place', or non-utilitarian. They are usually used for text but have some value for archaeology. For archaeological remains, certain artefacts appear symbolic or metaphoric whatever their context through their obvious non-kinetic form, e.g. a metre long flint knife (**4.3.7.2**). Certain contexts are particularly metaphoric e.g. burials and temples (**5.2**). Finally, comparison of a trait, explicable in utilitarian terms within one context, may be used to explain the same trait inexplicable within another context (**5.1**). For example, an aeroplane may be streamlined to facilitate flying. Streamlining bread toasters does not facilitate toasting. We may conclude that streamlining has more than practical significance, that it is metaphorically significant, it is associated with the modern or futuristic shape of aircraft. Examination of traits across contexts helps elucidate implicit metaphor.

There are exceptions to the correspondence between the non-kinetically utilitarian and ideology. Children's playthings are symbolic/metaphoric but not utilitarian. They differ from other symbolic/metaphoric items through their usual small size and their association with children. This association is often only apparent archaeologically in burials, where individuals may be linked with particular artefact types.

2.2.2 METAPHOR THEORY

It is my contention that metaphor theory is useful in understanding ancient Egyptian ideology. But, while metaphor has been studied in depth in the realm of language, it was not until 1999 that metaphor in material culture received similar treatment with Tilley's 'Metaphor and Material Culture' and Tarlow's 'Bereavement and Commemoration. An Archaeology of Mortality'[8]. Metaphor of text and metaphor of material culture are not identical (Tilley 1999, 260–273).

Explorations of Egyptian religion frequently rely on metaphor. For example, Eyre (2002) parallels killing and dismemberment in the *Pyramid Texts* (**glossary**) with sacrificial slaughter scenes. It is difficult to see how one could understand Egyptian ideology without metaphoric analysis. Perhaps the only difference between the methodology of this thesis and that of most other explorations of Egyptian religion is that here use of metaphor theory is explicit.

2.2.2.1 DEFINING METAPHOR THEORY

Metaphor theory is diversely defined (Tarlow 1999, 40), but all definitions see thought as embodied and imaginative, rather than literary. Concepts not directly grounded in experience are explained metaphorically. Such concepts include not only the ornamental but the commonplace, and scientific.

Metaphor may be seen as symbolism, especially as both terms are variously used by different scholars; thus, at times my use of 'metaphor' might be identical to another person's 'symbolism'. I see symbolism as one type of metaphor and prefer the term 'metaphor theory' rather than 'symbolism' because: a) symbolism tends to deal more specifically with explicit and univocal metaphor; b) metaphor theory specifically makes use of the notion of live and dead metaphors which may be important for the study of tropes over a long period such as Dynastic Egypt. Of course, this is only one view of differences between symbols and metaphors. Ricoeur (1976, 61) for example, sees metaphors as more bound than symbols, with symbols owing at least part of their identity to the bios (which I take to mean lifeforce, as opposed to human manufacture), so that his understanding of symbols is in some ways more like my understanding of metaphor.

Since, strictly speaking, my application of metaphor also includes metonym, symbolism and synecdoche, the term 'trope' should possibly replace it. As a more

[8] Though Tarlow's work also used textual sources.

encompassing word, ‘trope’ is arguably more appropriate. However, the expression ‘metaphor theory’ has already entered popular usage.

In this thesis the term ‘metaphor’ is not used following Chomsky and the structuralists but rather derives from the word as employed by those such as Gombrich (1972, 165–191), developed by the linguist Lakoff (1987), the philosopher Johnson (1987), the psychologist Gibbs and others, and further developed by Lakoff and Johnson (1999), and more recently used archaeologically by Tilley (1999) and Tarlow (1999)[9]. Metaphor encapsulates the notion that ideas surrounding one entity may be carried over and applied to another, or to several others; a metaphor stands for something else. In Egyptology, Goldwasser (1995); MacDonald (2000) and Landgráfová (2008) have explicitly analysed metaphor but within the terms of the written word. This thesis explores both text and non-text.

Metaphoric thought allows contradictions. By means of a pool of ‘social discourse’ from which dominant myths may be extracted, it is possible to explain away apparent contradictions (Boon 1972, 101). Or at least, the contradiction remains but the actors are satisfied.

Metaphor explains by comparing the otherwise inexplicable with the understood. For example, in our society argument is understood in terms of war. We establish and defend positions, we can ‘win or lose’, ‘attack an opponent’ and try to ‘shoot down’ their arguments. This does not have to be so. Lakoff and Johnston (1980, 5; 1999) have suggested imagining societies where argument is conceived in different ‘concrete’ terms, for example, using the metaphor of theatre. Metaphors guide what we are able to think. This does not mean however, that we only think in metaphorical terms, so that our entire universes are a complex interplay of tropes. Metaphors must be grounded in concrete experience for them to be believable.

It should be stated that I do not see flint as a ‘key symbol’(**glossary**). ‘Key symbol’ or ‘key metaphor’ is sometimes used to refer to an idea, or, in the case of object metaphors, to an object (Ortner 1973 for key symbols; see also Tilley 1999, 30–33 with references) which underpins a whole host of ideological activities and meanings, though I would prefer the term ‘key symbol’ in place of Tilley’s ‘key metaphor’, as the symbol/artefact may be static but the metaphor variable.

2.2.2.2 APTNESS OF METAPHOR THEORY

Metaphor theory is particularly appropriate for the study of Egyptian ideology because:

[9] These writers have all, of course, employed the term in slightly different ways.

- Tropes (metaphor or symbolism) are often said to be at the heart of ideology
- Artefacts signify through metaphor
- Ideology tends to concern itself with the sublime, the almost unknowable, which can only be reached through metaphor
- Metaphor theory can explain ideological development
- Past Egyptologists have explained Egyptian thought in terms of metaphor

I discuss each point in turn.

2.2.2.3 TROPES AT THE HEART OF IDEOLOGY

Scholars have considered the link between religion/ideology and metaphor, though largely in reference to religion dependent on belief in gods, often using the term symbol rather than metaphor. Verhoeven (2002, 13–16), summarises several views. Anthes (1963, 69) stresses the absolute centrality of symbol in religion. Eliade (1969) suggests that symbolism underlies all religious phenomena. Gombrich (1979, 13) claims "'religion' provides most cultures with a central area of metaphor". Fernandez (1986) argues that myth and religion are completely grounded in metaphor. Renfrew (1994, 47) states that symbols are important in understanding the unknown and supernatural. Tilley (1999, 10) claims that metaphor is 'fundamental to all belief systems' and Burke (1999, 16) allows a symbolic element to ideology. However, in contradiction, Baines (1985, 23) disputes the idea that 'metaphor and metonymy stand at the beginning of the formation of deities', though perhaps understands 'metaphor and metonym' as explicit symbolism, rather than the use of tropes, either explicitly or implicitly employed.

Because it is emotional rather than rational, metaphor allows us to grasp the unseeable (Gombrich 1972). Geertz (1966, 8) points out that his definition of religion puts a tremendous weight on the term 'symbol' and adds that symbols are used in religion to channel activity through mood and motivations. Turner (1967) also refers to 'condensation' symbols, which have a strong emotional quality and condense many meanings. The emotional element may also mean a trope is not recognised within its social arena (Tilley 1999, 260). Condensation of meaning in artefacts and the emotional in archaeology, is discussed below.

2.2.2.4 SIGNIFYING THROUGH METAPHOR

Artefacts affect human culture, not only as passive tools for kinetic purposes, but also through signaling. That artefacts create and transmit messages means they have material agency (see Jones 2004, 330; Hoskins 2006 for further references to material agency). However, in agreeing that artefacts have agency, I do not suggest that they act by their own volition. They are of course dependant upon human will. They are effective agents, rather than conscious agents (Gell 1998; Robb 2004, 132–133). The agency of signalling is effected through metaphor.

'Humans mime the animate in the inanimate, and the ideal in the real, to create and transform the world around them, only to be created and transformed right back. Such is the reality of matter: it strikes back' (Nakamura 2005, 22). The artefact in conjunction with the mind, can influence cosmologies; objects do not simply manifest pre-existing thoughts. To give a flinty example: following Ortner's (1973) ideas of 'elaborating symbols', flint can be a model for cultural action. The king can be a 'wall of flint' protecting his people (**6.7.3**).

The artefact is made meaningful in a non-kinetic sense through tropes (Tarlow 1990; Cowgill 2004, 275); through common links between the artefact's physicality, and/or its biography and/or its context on the one hand, and with other artefacts, environments, actions and the human mind (**2.3.2.1**) on the other. Gosden (2005) argues that artefacts particularly have agency *en masse*, through similarity (he uses the term 'style') with other artefacts.

2.2.2.5 SUBLIMATING THROUGH METAPHOR

Sublimation is vital to ideology, and metaphor is well suited to sublimation. We shall see in **Chapter 4** that various traits of flints afforded sublimation and thus promoted flint's possibilities as a ritual material.

Sublimation has been posited for religion (Durkheim 1965, 22–26; Geertz 1966, 27–27) but is true for ideology generally? Belief in gods, 'religion in the narrower sense' (Assmann 2001, 4–5), is only one indicator of sublimation. Ideology may also imply meta-narratives and cosmologies, something beyond the mundane (this is related to the exotic and 'Other' discussed in **4.4**).

As metaphor produces an emotional, sublimating response, it has the effect of melding ideology and reality. Thus, metaphor links worlds. In application of metaphor and in sublimation, ideology deals with the realm of the poetic. However, this process does not detach ideology from the everyday. Metaphors and their sublime element

become very much a part of the way we understand and therefore live in the world. Cosmologies frequently concern analogical, not logical associations between entities. Mechanisms of connection may sometimes be constructed, but are not necessarily fundamental to the cosmology nor indeed need not be upheld by all. Thus, Barth (1987, 71) explains 'the Baktaman showed a material and practical interest in their cosmology, and could be both pragmatic and outright mechanistic in their constructions of it. But I cannot see that perspective as the central, constitutive one in the tradition of knowledge sustained by their rites….Certainly the non-verbal assertions made in these rituals leave mechanisms of connection entirely unexplored….'

This acceptance of cosmology without question can be sublimated as mystical experience, or, can be accepted as the secret, unknowable 'law' of 'God'. As Avis (1999), along with many theologians, poets and others have stated, only symbol, myth and metaphor can get close to the ineffable nature of God. Of course, some believers in the sacred would argue that divinity is knowable in terms of Aristotelian logic and that it is only in mystic religion and mystic realms of the 'world' religions where such beliefs are stated. By contrast, for those who do not believe, all religious experience appears illogical. Metaphor allows some explanation of the verbally unexplainable; it can therefore be a way for outsiders to understand religions and ideologies.

It is apposite for this thesis that the verbally inexplicable can often be reached through solid metaphor, through artefacts. This is at least partly due to the heightening of the emotional aspect triggered by non-textual artefacts (**2.3.3.3**).

2.2.2.6 IDEOLOGICAL DEVELOPMENT AND METAPHOR

Tracing the development of metaphors may potentially illucidate ideological development.

As shown above, Bourdieu states that 'symbols' (his preferred term) are used differently in the sacred and profane. Tilley, using the term metaphor, agrees (1999, 264–265) and adds that it is within the explicit use of metaphor, in ritual use, that new metaphors may arise. Since flint was particularly used iconically in the Early Dynastic, it seems that this period would see the formation of new metaphor. As stated above, however, explicit use of metaphor does occur outside ritual.

Potentially, metaphor can explicate the development of religious thought, through mapping changes from implicit to explicit metaphor and vice versa. Most studies of metaphor discuss short-term effects. Archaeology has the potential of

allowing study of metaphor over a long period, and thus it may be possible to see the birth and rebirth of a metaphor.

Certain flinty metaphors continue throughout Egyptian history, while others are dropped. We may wonder if those that continue are particularly charged with emotion, though this area is difficult to study (**2.3.3.3**). Other metaphors can move from being live to dead and vice versa.

Unconscious use of metaphor is sometimes described as 'frozen', 'dead', or 'implicit'. In literature this refers to metaphors which are implicitly accepted rather than explicitly manipulated. They may also be termed 'phatic' (Jakobson 1960) or 'redundant'. Such metaphors are not intended to convey information but rather to facilitate social intercourse (see also Tarlow 1999, 40–42 for discussion of phatic or redundant metaphor). Redundant metaphor in not meaningless but structures thoughts and actions. Tarlow (1999, 42–43) uses the example of chair 'legs'. This dead metaphor meant that 19th century furniture 'legs' were covered as the appearance of 'legs' was taboo (furniture legs were metaphorically human legs).

Religion is often connected with explicit (live) metaphor. As stated above (**2.2.1.1**), Bourdieu made the distinction between explicit symbolism in ritual and both implicit and explicit symbolism in the everyday. There is a continuum between explicit or conscious use and unconscious or implicit use of metaphor, the former equating with the sacred, the latter with the profane.

The long term changing nature of flint in ideology might be examined through implicit and explicit metaphor. The problem is how to recognise the two in text and archaeology. As will be illustrated below (**2.3.1.1**), text is particularly suited to the abstract and iconic (**glossary**), thus may be better able to illustrate explicit metaphor. However, there are problems in equating increased text with increase in explicit metaphor.

Text does not simply reflect, but changes metaphor. The introduction of writing makes ideology more explicit (Goody 1986). Writing changes human thought, making it analytical and precise (Ong 1958; 1982, 104–105). Text forces precision (**2.3.2**) thereby enforcing the explicit. Storing and comparing ideas is easier using text than oral tradition. This would explain Goldwasser's (1995) claim that advanced metaphor first appears on the Narmer Palette and Libyan Palette (**glossary**), which are made shortly after the introduction of hieroglyphs; and Brunner-Traut's (1986, 439) statement that in the construction of the state, the Egyptians established a new mental order and 'released themselves from their attachment to the object'.

However, any assumed move from an implicit to explicit religion, evidenced by increase in text, may only be a factor of the elite and not of the silent majority (**2.3.1**). Most Egyptologists, in discussing changes in Egyptian religion, largely observe state religion through text and architecture, and examine religion in the narrow sense of contact with gods and provisioning the dead. A wider examination of the evidence, including non-textual archaeology, might suggest another side.

There are further problems in studying explicit and implicit metaphor from a narrow range of evidence. Baines (2006, 5) discusses lack of overt magic-religious symbols (explicit and univocal metaphor) in Old Kingdom tomb scenes. It is possible that such scenes represented a perfect world where magic was unnecessary (Pinch 1994, 112–114); or alternatively, there may have been a prohibition against its display. This does not mean that magic was not used, and indeed Baines cites the extensive use of amulets as evidencing its use, at least in some sectors of society.

We may also seek implicit and explicit metaphor in artefacts. As will be illustrated in **2.3.1.1**, it may be possible to differentiate isochrestic and iconic artefact style, and while the two are not identical to implicit and explicit metaphor, there is a link. Furthermore, explicit metaphor may be more evident in ideological 'hotspots', traditional ritual contexts such as the temple and grave (**Chapter 5**) which seem particularly strong on performed ritual.

The move from explicit to implicit metaphor in flint may explain certain uses of flint. For example, the word *mds* meaning sharp (literally 'of flint') may be considered an implicit metaphor, which may derive from an explicit metaphor. However, the fact that it is implicit, does not make it meaningless. It may explain otherwise inexplicable action, for example, the use of ground flint as an eye medicine (**6.7.3**).

2.2.2.7 EGYPTOLOGISTS AND IDEOLOGY

In the past, Egyptologists have sometimes explained Egyptian religion in ways akin to metaphor and furthermore explained the development of religious thought as similar to change from implicit to explicit metaphor.

Gardiner (1927, 4) understood Egyptian language as particularly concrete, with few subtleties of thought or abstraction. Frankfort claimed that the Egyptians thought differently from us, mythopoeically (Frankfort 1948, 73, 362 note 4; Frankfort *et al.* 1946, 3–27). One characteristic of Frankfort's concept of 'mythopoeic' thought involved the tendency to think in concrete terms (an idea developed early in the 18th

century by Giovanni Battista Vico). In this he follows Lévy Bruhl's analysis of the minds of 'primitive peoples', and like Bruhl is at pains to point out that 'primitives' are not illogical. In mythopoeic thought several contradictory ideas may be accepted at once. Frankfort's idea of the mythopoeic, however, differs from modern ideas of metaphoric thought in its emphasis on attributing cause to deities (Segal 2004, 41–41). He has also been criticised (e.g. Anthes 1963, 1965; Hornung 1982, 238; te Velde 1986), largely for claiming different thought processes for different societies. See also Wengrow (1999). Hornung (1992, 14) comes close to equating Egyptian religious thought with metaphoric thought, seeing it as associational. However, he also sees a qualitative difference between Egyptian thought patterns and our own.

Brunner-Traut (1986 [1919], 441) argues provisionally that for art, language and literature, the Egyptians did not use abstract thought but rather were grounded in the concrete prior to the New Kingdom. She terms this 'aspective'. Brunner-Traut describes a change from explanation of events within a mythical ahistoric time to a historical process of cause and effect. The change occurred in the 18th Dynasty. There are criticisms that this idea is largely unsubstantiated (e.g. Trigger 1975).

Baines (1984, 48–49) considers the New Kingdom a period of increasing 'sacralisation' or 'religiousity' and Assmann (2001, 1–5, 163–168) sees increasing secularization from Old to New Kingdoms. He compares earlier 'implicit' theology with ideas and symbols/metaphors embedded in culture with later 'explicit' theology reflecting distance from religious activity. The change is connected with a move to narrative prose, which Assmann (2001, 95–96) terms 'myth'. He further supposes a period preceding myth and an evolution of narrative form finally culminating in the Greek texts, for example Plutarch's record of the myth of Osiris (**glossary**).

Brunner-Traut and Assmann make much of the later 'narrative' in religion. This is congruent with a desire to explain things in 'logical terms', which one would expect of explicit religion. Narrative, it has been suggested, is not an attempt to establish proof, but rather of 'lifelikeness' or verisimilitude (Bruner 1986). Thus, narrative and explicit metaphor have a similar purpose; both are used as explanation.

This change could be explained as a move from implicit to explicit metaphor. Abstract thought involving narrative may be considered in terms of explicit metaphor. Here the metaphor is discursively constructed; it is conscious. Because of these qualities we see it as more logical. This does not mean that implicit metaphors are abandoned. These could be considered similar to the Greek 'scientific' ideals,

metaphors we unconsciously inherit (Lakoff and Johnson 1999, 373–390), the very factors which make us consider later Egyptian thought as more 'logical'.

Reasons put forward for this change are varied. Junker (1961) sees it in terms of mutation. Anthes (1963) suggests that the difference between Greek and Egyptian thought is that Egyptian thought comes from society, but Greek from the individual: Greek thought is discursively constructed, it is dogmatic, explicit and therefore coherent. As stated above, the actual increase in the quantity of text may affect how flint, or any other metaphor, is considered, because the actual act of writing makes ideas more explicit. One may also argue that as any topic develops it naturally becomes more explicit, through being thought and rethought. The change to narrative may be a result of implicit metaphor becoming unacceptable. Myths are only ever myths if they cease to become credible (Cassirer 1944; Avis 1999). An implicit metaphor is one that is not recognised, it appears emically as a literal fact. Myth and metaphor seem to follow similar trajectories.

However, not all myths continue once outside the realm of the implicit. Histories of western thought, such as that outlined by Foucault in *The Order Of Things* show that some categories of thought are simply dropped. Those categories which continue but are separate from the everyday, it may be surmised, are those in which involve particularly highly charged emotions.

The idea of movement between implicit and explicit metaphor eliminates the equation of differences in religious thought with different mindsets, breaking down the duality between them and us. However, are these changes real? As stated above, while Egyptologists, including Assmann and Brunner-Traut, have identified a move from non-myth to myth in text, several scholars suggest that there may well have been earlier myth in oral form (Hellum 2001, 11 for references and Hellum 2001, *passim* for discussion). Furthermore, it is possible that archaeology may point to early mythologising, though the lack of depictions of gods on Old Kingdom tomb walls rather supports the notion of early implicit religion.

2.2.2.8 RECOGNISING METAPHOR

Many studies of metaphor do not attempt to explain how metaphors are recognised. Tilley (1999, 133–173), in exploring body metaphors and lunar and solar connections in prehistoric rock art, or the metaphorical connection between landscape and the prehistoric constructed environment (1999, 185–238), does not explicitly explain how he identifies metaphors. Rather, use is made of ethnographic analogy, for example in

suggesting that the rock carvings may mark rites of passage (Tilley 1999, 154–155). Connections appear self-evident, and form a coherent story. However, arguably, this method of seeking ancient metaphor is unstructured; links are made arbitrarily. There is always a danger that metaphor is recognised purely by similarity which is significant for the researcher but not for the culture under study. This can give rise to seeing meaning where it was absent, for example in assuming that all long objects are phallic.

Metaphors are frequently recognized by juxtaposition within context, in ways which do not make utilitarian sense. Within textual analysis, Gricean Pragmatics (Grice 1989, 28–30) has been used to search for metaphor in ancient Egyptian love poetry (Landgráfová 2008). To simplify, Landgráfová sought metaphor in sections of texts that did not make literal sense, areas where Grice's Cooperative Principal is violated; a statement was inexplicably and obviously incorrect (this may be paralleled archaeologically by artefacts which are not kinetically useful). The Cooperative Principle contains maxims to ensure a conversation is understood. These include relevance and quality (truthfulness). So, in the case of Egyptian poems, describing the beloved as a house is literal nonsense. It only makes sense as metaphor. The suggested metaphoric use then had to make sense within context, that is, within constructs of ancient Egyptian society and within the context of the metaphor itself. Using an example relating to Egyptian lithics, frequent descriptions of flint knives as apposite weapons to kill Re's enemies do not make pure kinetic sense. Knives do not seem to have been used as weapons, and why should flint be specified? The notion of flint knives as apposite weapons of Re makes sense, however, if we think of flint metaphorically, as a solar material, imbued with the perfect time of the gods, for which corroborative evidence exists and which is possible in terms of the physicality of the material made metaphorical, shininess made solar. As a plus, the metaphor is not only contextually probable within Egyptian culture, but probable cross-culturally (**6.1.1**).

The Egyptian written language has the added advantage, from the analyst's perspective, of 'determinatives,' signs placed after a word indicating categorization (**glossary**). This feature has been used by Egyptologists to determine Egyptian categorization (e.g. Goldwasser 1995; MacDonald 2000). Determinatives show links between areas not etically 'naturally' connected. As the most common word for flint and a word for knife were the same in ancient Egyptian, *ds*, it might seem fruitful to examine the knife determinative (there is no determinative for flint, though there is for stone). A preliminary investigation shows that it is used for 'flint', 'knife', 'saw', 'slaughter', 'execution', 'to divide', 'massacre', 'to protect', 'sharp', 'to bite' (as in

snake bites), , ‘to burn’, ‘to sting’ (as in scorpion stings), ‘to be efficient’, etc. The knife sign can also be used as a determinative for the word ‘to brand’, perhaps suggesting that marking of animals and humans could be executed with a branding iron or by tattooing or scarification. The determinative for stone, unfortunately for this thesis, covers so many types of stone and stone artefacts as to give no insight into Egyptian categorisation on stone types. Interestingly, I find no occurrence of it after claws or nails, contra to what one might expect from textual descriptions of stone claws and nails (**4.2.3**; **6.2.1.2**)

In order assess metaphoric fit, Gricean Pragmatics suggest examining a potential metaphor over several contexts. We can first examine other contexts within the society under study. For example, if flint knives are found in pairs, we need to ask if the concept of duality is coherent within Egyptian ideology. Promisingly, within societies coherence of metaphor across the religious, secular, technological, etc. is evident, though some conflict is apparent, and connections may be loose (**2.2.2.1**). Foucault uses the word *epistème* to describe the coherence of analysis which exists between different aspects of social life. Others talk of *meta-narratives*. Douglas (1966, 2–4, 73–93; 1970) maintained that preliterate peoples, like modern peoples, did not divide life into different domains, but believed that in all human cultures there is a ‘drive’ to achieve consonance in all levels of experience and that the relationship between body symbolism, cosmology and social structure is ‘reflective’ (confirmed also by David *et al.* 1988, 378). Hodder (1992, 24) also discussed the value of searching for patterns of juxtaposition across contexts.

Furthermore, if the unchangeable is to be incorporated into metaphor and there is a drive toward coherence across domains, then static aspects would surely provide root metaphors. The problem would then be to recognise the unchangeable. This is not the same as ‘key metaphors’ (**2.2.2.1**), where the meaning associated with one artefact is variable.

However, Tilley (1999, 29, 263, 265; cited in Jordan 2003, 20) points out that while there may be degrees of coherence of material metaphors operating in different domains, they may be contradictory: ‘Solid metaphors do not therefore dovetail together neatly to form some kind of totalizing cultural code’. Furthermore we cannot be sure that items from different social contexts are similar for the same metaphoric reason. For example, the haft of a flint knife may depict a serpent. In another context a flinty serpent is described in text. The snake on the haft may relate to one thing and the flinty nature of the serpent in text to another.

2.2.2.9 ETHNOGRAPHIC ANALOGY

The plausibility of hypotheses, measured in terms of concordance or otherwise with other aspects of contemporary culture, is a factor of contextual archaeology. With the fragmentary record of the past, even for Egyptian society, one also has to turn to cross-cultural analogy. In this thesis, ethnographic analogy is used to select possible areas of metaphoric density, for example, to help select physical traits which may be examined for metaphoric analysis (**4.1**). Secondly, ethnographic analogy is used to suggest possible reasons for apparent metaphors. Ethnographic analogies employed in this thesis are general rather than specific. Since they are used largely as an indicator of potentially fruitful areas of research, as a heuristic device, I am not over-critical of them. I will also, of course, be analysing the actual evidence from Egypt, rather than accepting parallels uncritically!

Unfortunately, but unsurprisingly, there are no simple, clear universal relationships between metaphors and cultural domains. However, loose cross-cultural metaphorical links between certain artefacts and ideas are evident. For example, colour tends to be fairly universally understood (**4.3.1**). Celestial origin of stone seems reasonably common in societies where use of the material is embedded (**6.1.1**). Certain metaphors may be similar, because the materiality of flint largely unchangeable, and the human mind is similar cross-culturally.

Pareto (1935) suggested that once differences between societies are removed, we are left with universal drives which are highly charged with emotion not logic: urges which show the universality of the human mind. Such drives centre on life, death and sexuality. It is unsurprising then that metaphors cluster likewise, though these constellations are always culturally constrained. Pareto saw these drives as psychological; Lévy-Bruhl saw them as cultural (Evans-Pritchard and Singer 1981, 117). They are a mixture.

While ethnographic studies show that lithics function ideologically (Goring-Morris and Belfer-Cohen 2001, 258), explicit ethnographic analogies are frequently avoided, although they are in fact integrated implicitly into archaeological reasoning. Without recourse to analogy, it is difficult to say anything interesting about the past. Hodder (1982c, 11) contrasts the limitations of traditional archaeologists such as Piggott, who were unable to reconstruct ancient ritual to any extent, with the work of Shanks and Tilley (1982), Shennan (1982) and Hodder (1982d) who were able to succeed at least in part by making use of ethnographic analogy. However, explicit use

of analogy, used uncritically, can be used to support virtually any argument (for debate on its merits and dangers see Ucko 1969; Hodder 1982a; Veit 1994; Gramsch 1996).

Both inter (ethnographic parallels) and intra (metaphor theory) cultural analogy have been critisised. However, as well as ensuring that the analogy makes sense, the temporal and spatial positions of artefacts exclude some interpretations and support others (Pearce 1994, 130).

2.3 ARCHAEOLOGY AND TEXT

Text and non-text are here discussed in relation to possibilities and limitations for understanding metaphoric use of flint. Both text and non-text communicate literal messages; non-text by kinetic use and text through bald statements of fact. Both also communicate metaphorically. Metaphoric communication in text has long been studied, that in non-text less so. Where a technology, such as flint, moves from artefactual to textual visibility, the different factors operating upon and resulting from text and archaeology appear central to understanding. Additionally, as the ideology of Egyptian lithics has largely been considered through text (**1.3**), one might consider if an archaeological study would produce different results. Similarly, with a few exceptions (e.g. Tilley 1999, Tarlow 1999), metaphor has largely been studied within living societies and primarily through analysis of words. A study using archaeological evidence might produce different results.

This section does not discuss all differences between text and non-text but only those potentially pertinent for this thesis. There are, for example, many differences in which the two have traditionally been studied. For example, with exceptions,[10] text is often examined without regard to context (Kemp 1984; Kemp 1989, 130; Parkinson 2002, 7; Smith 2003, 168), with the erroneous belief that text directly mirrors the past (Parkinson 2002, 7–8). Text, again with exceptions, e.g. Piquette (2007), is traditionally studied divorced from the physicality of the artefact upon which it appears. In Egyptology, text is privileged as evidence so that non-textual artefacts still take secondary place to textual ones (Adams 1997; Meskell 2002, 8), though the situation is changing. Traditionally, archaeology has been deployed where there is no written evidence. It is assumed to have less relevance for historical periods (Smith 2003, 167–168 with references). Unfortunately, many excavations in Egypt have not been of a high standard (Meskell 2002, 11) resulting in irretrievably lost evidence.

[10] Richard Parkinson's work (2002) is a clear example which seeks to expound the importance of the study of context. There are others.

However, because of the tradition of philology in Egyptology, text has been relatively well recorded. Finally, archaeology has tended toward describing technologies, while historically Egyptologists have looked to text to explain belief systems (**1.3**).

While a good argument may be made for breaking down the dichotomy between text and non-text (Piquette 2007, 64–67, 92), some differences remain. These are not based on historical bias in the way the two are studied but on the nature of the two, although admittedly often these are differences of degree. These may be summarised by the following interrelated areas:

- Text is biased towards the elite; non-text is generally more democratic (**2.3.1**)
- Artefacts are more multivocal than text, less precise and more messy in meaning (**2.3.2**)
- Artefacts appear more real than text (**2.3.3**)

There are also similarities. For ancient Egypt, with its reliance on tomb and temple as evidence, both text and non-text relate to the archaic. Both also are subjectively interpreted.

2.3.1 TEXT ELITE; ARCHAEOLOGY DEMOCRATIC?

Both archaeology and text are biased towards elites: archaeology, because elites generally engender more physical remains than non-elites; and text, because most text is created and used by elites. However, for many scholars, archaeology is seen as less socially biased than text, thus more able to elucidate the lives of the majority (Glassie 1975, 8–12; Bietak 1979; Meskell 2002, 11; Moreland 2003, 103 has further references). This simplification carries some truth because:

- The deliberate nature of text makes it more subject to bias
- Text is an elite, specialised technology, thus its messages and audiences tend to be restricted to the elite
- The content of text relates more to the elite than non-elite

The elite, or otherwise, nature of text impinges upon the study of the ideology of flint because: a) in earlier periods most evidence is archaeological while later it is largely textual; b) ideas reflected in text are arguably those of the minority; c) the deliberate nature of text could make it more suitable for elucidating explicit metaphor.

2.3.1.1 DELIBERATE NATURE OF TEXT

Explicit metaphor may be particularly prevalent in text and implicit metaphor particularly prevalent in non-text, thus suggesting a means to explore the metaphoric development of flint. As stated above, it has been suggested that Egyptian religion generally becomes more explicit over time and it was posited that this could be linked with explicit use of metaphor. The means by which text and non-text trigger metaphoric linkages may here be apposite. Text is generally associated with the iconic, with explicit metaphor. Solid metaphors tend to be implicit, except perhaps in certain religious ceremonies. Moreover, Tilley (1999, 264) has suggested that use of explicit solid metaphor is associated with production of novel metaphors. Since one of the ways in which artefacts communicate is through style, a discussion of implicit and explicit style is also apposite.

The link between explicit metaphor and text and implicit metaphor and non-text is first examined. Non-text may signify, implicitly or explicitly. Style is one of the main ways in which artefacts communicate. Implicit metaphor can be equated with isochrestic style (Sackett 1982, 1986), resulting from *habitus* (**glossary**; Bourdieu 1977): briefly, isochrestic style results from enculturation, it is passive, while iconic style is deliberate. Iconic style may be equated with the explicit (Sackett 1982, 1986). However, there is not an exact correspondence between metaphor and style. Style simply refers to geographic patterns of similar traits which are not wholly mechanically necessary (e.g. Sackett 1982, 1985, 1986; Plog 1983; Wiessner 1983, 1985; Braun 1995). Style may include both physical traits as well as technology. A metaphor may be unique, though a style must result from a group doing things a particular way. Style is not the only means by which artefacts communicate metaphorically. For example, artefacts also transmit metaphorical messages through emotion; through association with people or places; or through their biographical histories. Nevertheless, as stated in **Chapter 1**, style is one of the means by which artefacts communicate and so has been widely discussed.

Non-textual artefacts fall into different categories – some are manufactured with the express intention of signifying, for example a monumental statue erected to express the power of a ruler; others are made with the intention of utility, and signify only incidentally, for example, a pottery vessel whose design, apparently emically unimportant, may mark it out as a belonging to a particular socio-economic group.

Other artefacts may signify iconically and isochrestically (Wiessner 1885; Hegmon 1992).

Isochrestic style may be implicitly metaphoric, though is not necessarily so. Ways of doing things may be taken for granted but based on metaphor. For example, the dark, plain suit preferred by certain professions is metaphoric of seriousness. Until recently PCs were only available in beige, white, grey or black, no pink, yellow or sky blue. One is tempted to see this as a metaphor for serious work. Choice of clothing may be more deliberately iconic, choice of computer colour more isochrestic.

Incidental, iscochrestic or unconscious style is more likely to reflect *habitus* (Bourdieu 1977) and thus the social realities of the actor. Iconic style may be used to deliberately distort, thus more likely to reflect the ideologies of the actor. It is iconic style, not isochrestic style, which equates with symbol/metaphor, thus one cannot (*contra* Gowlett 1984) simply associate arbitrary standardisation of form (style) with symbolic thinking. This does not mean that isochrestic style cannot communicate; it may, though in a non-deliberate way (Braun 1995, 126–127).

Related to this, iconic style is also more malleable to peer pressure, and thus conformity, than isochrestic style. Text, as it was always written for an audience, is iconic. The high visibility and related pressure to conform, associated with iconic style, makes it subject to bias, even if bias is unintended by the actor. Non-textual artefacts can include iconic or isochrestic style; text is always iconic, though can also include isochrestic elements.

The problem in studying artefacts is how to separate iconic from isochrestic style, a problem particularly acute since iconic style may become isochrestic and *vice versa* (Sackett 1985, 158; Wiessner 1985). Various scholars have suggested how iconic style may be recognised. The following are discussed in more detail in **Chapter 4**:

1. Added value and effort expenditure (**4.4**) both show the actor ‘means it’. Related to this Wiessner (1985, 163) suggests that isochrestic style is more likely to be featured using local materials and iconic style using exotic material (see **4.4** for a discussion of the exotic).

2. For artefacts, iconic style must be witnessed by the receiver. For lithics, and sickle blades in particular, many distinguishing characteristics are hidden by hafting (Rosen 1997, 147–148). These are probably a result of group learning, of *habitus*, and thus are isochrestic. However, some scholars dispute the importance of visibility (**4.2.4**).

3. One may see a fourth measure of iconic style in geographical distribution (Plog 1995). While isochrestic style shows clinal distribution, style connected with the symbolic/metaphoric does not. Certainly Egyptian lithics are very different from those of the Mediterranean and Levant (e.g. Rosen 1997). However, the study of Egyptian lithics, in relation to north-African lithics, is undeveloped. Nevertheless, it does seem that certain items are specific to Egypt, notably 'razors' and bifacial knives (**Appendix 1**). One may thus see these types as ideologically important of Egypt.

Tilley (1999, 264–265) states that much material metaphor is implicit and artefacts are only explicitly used metaphorically in special practices such as ceremonies and rituals. However, deliberate signalling may also occur outside rituals, for example in the style of clothes. One might concede, however, that explicit metaphors are commonly used in rituals, as discussed in the connection between ritual and metaphor, above.

Text is always produced with the express intention of communication, deliberately and consciously (see Moreland 2003, 103 for references). For Egypt there are few items such as personal diaries or private musings, and even if there were, this is still deliberate communication made with a receiver in mind. Text, then, can become a vehicle for distortion of the truth. For this reason one may argue that text demands a consideration of the biases of its creator, artefacts less so. One might argue as to whether, or not, text was a means of propaganda (deliberate distortion) for ancient Egypt or rather ideology reflecting consensus (see Smith 2003, 168–206 with references), but we must agree that textual artefacts do appear more iconic. This is not to deny an element of the implicit.

While Egyptian literature may express ideological statements it cannot always be described as pure propaganda because many texts must be assumed to have been written only for the minority, and because the nature of texts is so 'diverse, ambiguous and ironic' so as to be an unsatisfactory means of advocating state values (Parkinson 2002, 14–16). Such a situation of course varies from period to period and from literary genre to literary genre. As with archaeology, context is important in understanding its role. Monumental texts on temple walls are perhaps most likely to be propagandist. For flint references, these include the inscriptions on the walls of Dendera (**map 6**) and Edfu (**maps 2 and 8**). However, while the populace could enter the exterior areas of temples (Sadek 1987), inner areas were seen only by selected priests. Thus, the propaganda role of such texts was inevitably limited.

2.3.1.2 SPECIALISED AND ELITE NATURE OF TEXT

Both text and non-text are elite biased, but the specialised nature of reading texts makes it particularly biased. Here it is first demonstrated that reading is a specialised technology particularly related to the male elite.

While some archaeological items can only have been associated with the elite, archaeology is democratised through inclusion of commonplace technologies, many produced by non-specialists. For example, crudely made borers found on Old Kingdom sites were probably made on the spot from river pebbles, presumably by non-specialists (Pawlik 2005, 204). In **Chapter 4** it is shown that certain flint tools were associated with wealth, others were not.

In contrast, text was always a technology of a literate minority. While the nature of Egyptian texts varies from period to period and literary genre to literary genre, generally texts concern a small, elite world (Gardiner 1961, 54–60; Parkinson 2002, 49, 66–78). Estimates for Dynastic Egyptian literacy rates usually vary from 10% in unusual settlements such as that of craftsmen at Deir el-Medina (**map 7**), downwards, though the picture is complicated by the probability of different levels of literacy (Richards 2000, 43). Baines (1983, 584) estimates that in most periods only 1% of the population was literate. This is tempered by the probability that text is to some extent built upon oral tradition (Parkinson 2002, 55–57), with some texts made for performance (Parkinson 1997, 11) and colloquial language within them common (Parkinson 1997, 12).

The difference between text and non-text however, lies not so much in the specialisation of production but rather of reading. Reading text is a specialised skill. Because metaphors associated with it are more arbitrary than those connected with non-text, and because text needs to be precise in order to communicate over spatial and chronological distance, creating and understanding text requires a lengthy formal apprenticeship. Meaning behind non-textual artefacts is generally more self-evident and informally learnt because it relates to physical use and context. It is therefore more widely accessible.

Reading objects, unlike reading text, is not age specific or tied to a particular learning level (Shu 1994, 82–83). Most age groups and abilities can understand basic meaning behind an object if they belong to the cultural group framing that meaning. This does not mean that ‘deeper’ meaning of all objects is available to all. To some extent this still requires learning, sometimes extensive learning.

Thus, because reading text, unlike reading artefacts, was specialised and because archaeology also includes non-specialised artefacts, textual artefacts are more biased in favour of the elite. The question is then; could the elite speak for the majority? There are arguments surrounding the degree of cultural heterogeneity of ancient Egyptian society (Baines 1983, 586; Parkinson 2002, 17–18; Smith 2003, 177–187). What is agreed is that the elite lived very different lives from those of the majority (Meskell 2002, 12–13) and I would say a restricted technology must always be suspect even if democratic credentials are claimed for it.

By way of support for this argument, the religious life of the royal city of Amarna (**maps 3 and 5**) is evidenced differently in text and non-text. From text it appears that the new religion was centred upon the Aten and the royal couple, a viewpoint expressed by the elite. In contrast, from archaeology we see that traditional deities continued to be worshipped (Meskell 2002, 11 with further references).

Moreland (2003, 104–105) argues that the statement that text does not include the 'oppressed' is overstated. Text is important in understanding the 'voiceless' because it can be a technology of suppression. This is correct,[11] though the fact that it is a technology for suppression only allows a partial insight into the lives of the non-elite. One can hardly argue against the notion that text more readily illuminates the thoughts of the rich.

2.3.1.3 THE CONTENT OF TEXT

Ancient Egyptian literature tends to give more information on the lives of the richer members of society. Even, the 'Tale of the Eloquent Peasant' actually recounts the misfortunes of a merchant, not the poorest of the poor. However, court records do include information of the 'ordinary' people of ancient Egypt. Since archaeology incorporates artefacts used and made by both rich and poor, messages incorporated therein give information on rich and poor.

2.3.2 THE MULTIVOCAL AND 'MESSY' NATURE OF ARTEFACTS

Messages supplied through text are frequently complex, multivocal and ambiguous, yet compared to artefactual messages, textual messages are usually simple and clear, especially for a reader separated by time or space. The multivocality of non-text compared to the precision of text, is predicated upon the following:

[11] Certainly for Egypt text was used in the maintenance of law and order and ensuring payment of taxes, etc. which could be classed as 'oppression'.

- The meaning of artefacts lies in their relationship with ideas and each other, with their physicality, context and biographies
- This, plus additional factors, allows artefacts to condense meanings, but shorthand means loss of specificity
- Arguably, the emotional response demanded of artefacts contrasts with the more abstracted way in which text signifies
- Because text deals with abstract symbols (icononic and univocal metaphors), the meaning of text has to be agreed upon and the basics needed for understanding this must be formally taught. The meaning of artefacts is not usually so formally taught
- Text is employed to communicate over greater time and space than artefacts and thus must be clearer and more precise in meaning

Several of these facets are interrelated. It should not be assumed however, that ambiguity of message is always problematic (Wiessner 1985, 162). Ambiguity of message may have the effect of ensuring that more individuals are convinced.

2.3.2.1 MEANING IN OBJECTS: PHYSICALITY, BIOGRAPHY AND CONTEXT

Artefacts are not metaphoric/symbolic in the same way as text (Graves-Brown, P. 1995; Jordan 2003, 276, 280; Boivin 2004; Piquette 2007, 97–98), though one could argue that differences are those of degree. While all messages depend in part upon their medium and the human mind, for non-textual artefacts the meaning is particularly ingrained in the medium, the physical attributes of the object, its biography as well as its context (Tilley 1999, 263–4; Boivin 2004). Thus, artefact meaning is not arbitrary to the degree that is so with text (Barth 1975, 208; Hodder 1992, 14; Tilley 1999, 28, 265) and moreover it is particularly multivocal. The contextual dependence of artefact meaning is problematic for Egyptologists where original context is often impossible to reconstruct. As objects are more abundant than text, their contexts are more variable, even for one object type, and each context could give rise to a different meaning. See **Chapter 5** for detail on context. Meaning carried by artefacts is therefore not a closed one-to-one relationship but is rather akin to Wittgenstein's (1953) 'family resemblances' or Zadeh's (1965) 'fuzzy sets'. Multivocality means that the object, like a visual image, can be used to condense meaning. Tilley (1999, 263) makes the point

that artefacts are particularly strong at condensing metaphor. However, this condensation makes meaning unclear – the shorthand loses the specifics. For solid metaphors, mixed metaphors are not uncommon (Tilley 1999, 271). The same is not so obvious in text. Of course a clever poet can condense meaning within a word, but this is the exception rather than the rule. An example of such multivocality through punning is given in **Chapter 6**, **222**.

The medium on/in which text is transposed is of course not irrelevant to transmitted meaning (**2.3.3.1**). Likewise, its physical context is important; for example, it needs to be sited to be seen by its intended audience. Social context is also vital (Parkinson 2002). Nevertheless, generally, for text, more so than for artefacts, the message depends on the text itself, on the placing of words within it, rather than the context outside the text.

2.3.2.2 TEXT: COMMUNICATION OVER TIME AND SPACE

More profitable is a book than a graven tablet, than a chapel-wall [?] well built…. A man has perished and his corpse has become dust…. But writings cause him to be remembered in the mouth of the story-teller.

Papyrus Chester Beatty IV, cited in Simpson 1972, 1.

Because text is precise it can communicate complex messages precisely over time and space, making it extremely useful to the archaeologist/historian. Precision is possible through linking symbols (words) to a narrow range of meanings within a strictly controlled pattern (grammar). This means once the code is cracked the intended message can be read. Of course, there is more to language than semantics (Grice 1989) so often an utterance means more than what is actually said. However, artefacts are still less precise than text. Not only does an artefact mean more than its kinetic utility but artefact messages are more dependent on physicality, context or biography. This means artefact style rarely signals over great distances (Wobst 1977, 323; Plog 1983, 127).

There are exceptions to the precision of text. This seems particularly so with religious texts. Reasons for this may include the confused state of mind of the author, perhaps induced by extreme euphoria, or may result from the aim of ensuring that only initiates understand the correct meaning (the same factors equally apply to artefacts used in religious ritual), or to indicate mystery. Nevertheless, text has the potential of

precision. Thus, for example, text can link flint with particular deities in a way in which artefacts are not able to (**Chapter 6**).

2.3.2.3 PROBLEMS OF TRANSLATION

While text is more precise in meaning than artefacts, in reality uncertainties remain. In this section the problems relating to recognition of flint in Egyptian written sources are considered.

Various words have been translated as flint: see Harris (1961, 138–139); Midant-Reynes (1981) for summaries. There is doubt as to the precise translation. For example, the word *ds*[12], refers to both a knife and to flint (*WB* V, 485–486). Thus, in this thesis a knife is only assumed to be made from flint if:

a) the word is used adjectively,

b) it occurs at an early date, as in the *Pyramid Texts*, when knives were commonly made of that material (a stance taken by Faulkner 1969, 54), or

c) the word takes the stone determinative (Gardiner's O39).

Regarding point 'b', the *Pyramid Texts*, though written down in the Old Kingdom, are believed to have been composed in the Early Dynastic. Copper was not commonly used for everyday tools until the introduction of arsenical copper in the Old Kingdom (Ogden 2000, 152–153).

Some scholars, such as Faulkner, rarely translate *ds* as flint knife, even where the stone determinative is used, contra Ritner (1993, 163 footnote 758). However, it seems unlikely that the stone determinative was casually placed in text, particularly as it becomes increasingly common after the Middle Kingdom, when the flint knife is archaeologically less common. Some might try to argue that the appearance of the stone determinative may imply a stone, but not a flint, knife. Certainly, knives, in the Early Dynastic Period were occasionally made from quartz, and the *ds* object on the Berlin amulet board (Berlin 20600; Harris 1961, 138) was made of quartz. It is my belief that there was certainly some confusion between flint and rock crystal. However, since most knives were of flint, it is more likely that *ds* meant flint. There is a separate word for rock crystal, but this does not necessarily mean that *ds* could not also apply to it. Since the word *ds* seems more commonly used after the Middle Kingdom, when rock crystal knives are unknown, it seems that the Egyptians were either referring to

[12] The writing *ts* is occasionally substituted for *ds* from the Late Period (e.g. Dendera X, 234; Cauville 1997 I, 123, Cauville *et al*. 1997, I, 234; Cauville *et al*. 1997 II, pl. 107, pl. 136). This is due to phonetic changes, the value '*d*' having changed to '*t*'.

rock crystal as a long obsolete material, or referring to flint as something which was still used, albeit with decreasing commonality. While the former is possible, the latter explanation is more likely. This is supported by the phrase *ds km* 'dark *ds*' (**4.3.1**), an unlikely description of rock crystal (though perhaps one that could be used of dark quartz), or, see below, of obsidian.

Thus, the traditional equation of *ds* as flint is accepted, whilst leaving open the possibility that rock crystal and quartz were considered in the same set. Flint, quartz and rock crystal are all modern definitions yet all, as silicates, share the possibility of being shaped by knapping. Indeed, all were utilised by the Egyptians through this process. For the Egyptians there were other common properties between silicates, some of which may have meant properties of non-flint acted back on understanding of flint. While most eyes of statues and coffins tend to be travertine and obsidian rather than flint, there are examples of crystal eyes. The 4th Dynasty statues of Ra-Hotep and Nofret, the 5th Dynasty Ka-aper and the eyes of the statue of the 13th Dynasty King Hor in the Cairo Museum all have particularly fine lenses of rock crystal. This, given the conceptual link between quartz and *ds*, might explain the metaphor of the flint eye (**6.2.2.3**). Additionally the archaeological occurrence of ground lenses in the eyes of wooden statues plus the fact that crystal rocks, when struck together produce an electric current, which can be seen in the dark may also explain the link between *ds* and fire (**Chapters 4** and **6**).

Ds ḥḏ, a substance for amulets (**4.3.1**) may conceivably mean rock crystal. Rock crystal amulets are uncommon (Andrews 1994, 103–104), but more common than those of flint (e.g. Aston *et al*. 2000, 52). However, here, I assume that *ds ḥḏ* is a pale/shiny flint, not rock crystal. Rock crystal is usually assumed to be *mnw ḥḏ* (Andrews 1994, 50; Aston 1994, 65), a term applied to vessels (Harris 1961, 110; Aufrère 1991 II, 567) or *kꜣ* (Aston 1994, 65). There are other less plausible words for rock crystal (Harris 1961).

Some authors, e.g. Cauville 1997 translate *ds km* as 'obsidian', though the Wörterbuch (V 485-486) calls it 'Feuerstein' and Harris (1961, 139) and Aufrère (1991, 568–569) also believe it to be flint. While the translation as obsidian may be correct, there are no certain archaeological examples of obsidian knives known from Egypt but very many flint ones[13]. While it may be a mythical material that is referred to, it seems more likely that the common, dark flint is intended. The word *km* does not always refer to the extreme hue which we think of as 'black'. For example, Egypt itself

[13] I have found none in museum collections.

was known as *kmt*, the 'Black-land', indicating the dark fertile strip within the 'Red-land', *dšrt*, the desert.

At Dendera (**map 6**) *ds ṯḥnt mꜣʿ* is used twice, once on the amulet board and once as the material from which a god in scarab (**glossary**) form is made (**4.3.1**). Cauville translates the phrase as 'obsidienne et faïence véritable' (Cauville *et al.* 1997 I, 216) in the former instance, and as 'silex, faïence' (Cauville 1997 I, 123) in the latter. Midant-Reynes (1981, 42) translates the phrase as 'silex brillant véritable'. Harris (1961, 139) believes *ds ṯḥnt* to be pale yellow flint. I follow the translation by Midant-Reynes, given the connection between *ṯḥn*, used elsewhere of flint (**4.2.6, page 134**; **4.3.1**, **pages 145–146**), and *ṯḥnt*. Scheele (2004) believes *ṯḥnt (mꜣʿ)* to be Libyan Desert Glass. She defends the identification, based on its Libyan (*ṯḥnw*) origin. Libyan Desert glass is little known for amulets (except for the scarab on a pectoral of Tutankhamun), while flint is more common (**4.3.7.1**).

The phrase *m ds*, is accorded different interpretations, sometimes as *mds*, 'keen' or 'cutting' [one] (e.g. Allen 1974, 292). Alternatively it may be understood as *m ds* 'with flint' or 'sharp knife' (e.g. Faulkner 1969, 288). Kees (1925) describes the use of the word as 'knife', a verb adjectively. In the *Pyramid Texts* it frequently applies to the crescent moon, the knife of Thoth (**glossary**; Derchain 1962, 41–42 includes Khonsu as a deity associated with the *mds* knife). Interestingly, the crescent flint knife is distinctive to Egypt at this date, thus the form of the knife could well have been significant. The earliest metal knives are not of this shape. The word *mds/m ds* may include the stone determinative emphasising its origins (Kees 1925, 2–5) as *m ds* 'with flint'. *Mds*, when translated as 'powerful', can take the flame determinative. Wilson (1997, 480–481) translates *mds* as 'Violent One' (after *WB* II, 183), which by the Graeco-Roman Period had become an attribute and word for Seth. When using the term *mds* in support of a flinty connection in this thesis, only examples taking the stone determinative are considered.

2.3.3 THE REALITY OF THE OBJECT

Non-textual artefacts appear more real (concrete, able to be felt either emotionally or physically) because:

- Text is more abstract than artefacts
- Artefacts are able to transmit through sensual means
- Objects are understood by a wider range of people compared to text

The reality of the artefact increases its power as a metaphor.

2.3.3.1 ABSTRACTION OF TEXT

Text is not abstract but is abstracted from situations (Parkinson 2002, 19). That the abstract nature of text was recognised by the Egyptians may be reflected in the use of a papyrus roll as a determinative to express the 'not concrete'. The abstraction of text and the 'reality' of the non-textual artefact is however a generalisation.

Messages received from both text and non-text derive from interaction of receiver with artefact. However, messages inherent in text are not inevitably and directly associated with the materiality or the context of that artefact but rather can refer to a more distant origin. A book about flint knapping does not depend for its message upon the materiality of paper (it could equally be digitised), but rather the essential medium of communication is the word which refers back to knapping. As stated above, with the non-textual artefact, the materiality of the object and/or the object in context is more fundamental to the message. Because ideas explained in text are one step extracted from praxis, the need to engage with them in order to fully understand them may not be quite as necessary as for non-textual objects. So, for example, text can describe how to knap flint. However, unless one actually engages with the object, unless one practices it, the action cannot be fully understood.

This means that textual messages referring to the materiality of artefacts are always incomplete. However, the fact that textual messages are easier to disengage from their context and yet retain a coherent meaning, because they can be abstract from situations, means text is more suited to explain ideas detached from the kinetic world such as divinity and ideology.

While above it was demonstrated that the materiality of the artefact engaging with the receiver is less important for text than non-text, this difference is a continuum. Materiality can be important in textual message transmission. Discussions with bibliophiles would show that they value, not just the information within the book, but the physicality of the book itself. Text on a temple wall appears more monumental, more permanent than that on papyrus. An ostracon (**glossary**), because of its low value, may impart the message thereon with a lower value that a message on papyrus. An ancient, inscribed monument imparts romance and other emotions associated with the past. In this sense some of the 'magical contagion' and sensuality (**2.3.3.3**) usually associated with non-text artefacts is transmitted to text.

Additionally, one might argue that in the case of 'icons' of text, such as the original Magna Carta, materiality is vital. However with such items, the original message is usurped by the message imposed in more recent times. The appeal of the Rosetta Stone to Egyptolophiles, their 'need' to see the real 'object' is not lightly dismissed despite the fact that the text itself can be as easily, if not more easily, seen on a good photograph. However, in the case of the Rosetta Stone, the message that makes the real thing important to Egyptophiles is not that intended by the maker, not the actual words engraved on the stone, but rather its closeness with Champollion, the fact that this item was the key to deciphering hieroglyphs. Indeed, many Egyptophiles might know little of the actual words inscribed on the stone, but would recognise this as a key artefact in deciphering hieroglyphic script. The materiality of the thing, its more recent historical context, is more important than its intended use, its textual, written message.

While materiality is thus important even for textual artefacts, it tends to be restricted in part to 'iconic' items. With non-textual artefacts the dependence upon materiality and context in the transmission of message is much more evident. This dependence upon materiality to convey the message may result in making the artefact appear more real.

For the Egyptian written script, in particular, the situation is more complex in that the determinatives always retained a measure of the concrete, a picture standing for the actual object. Thus, Egyptian script could be described as particularly metaphoric (Goldwasser 1991; 1995).

The reality of the non-textual artefact may be heightened by the fact that it may transmit its message in a more intimate, sensual and emotional way than the textual one. I start with the importance of the sensual.

2.3.3.2 VISUAL, HAPTIC, AURAL[14]

The sensual means by which text and other artefacts signified in the past enhances their power. Today, text is largely received visually, though in the past its reception would have been aural (Moreland 2003, 35–37). Parkinson (2002, 7–8) has described the importance of understanding Egyptian text in its original context as a performance to be heard and seen. Jordan (2003, 20–21, 276) describes artefact signification more generally as meaning created through a relationship between materiality and the body. However, the body also encompasses the mind and the visual and so the differences

[14] For a definition of haptic see **glossary**.

between the way text and non-text communicate is more through different senses, rather than as a duality of body (sensory) or mind.

Textual messages may be considered at least one step away from reality in that the senses and emotion may be described in text but are more immediate to the receiver in the artefact. The method of communication by the non-textual object is more intimate. It demands a closer, sensual communication. This is particularly the case where communication is haptic (dependent on touch), at one time much more important for communication (Herring 1949). This gives rise to emotional response in the receiver and also elicits a heightened sense of reality.

Metaphors produced by artefacts are also more real than those produced by words because they involve more senses. 'Words provide no substitute for the power of the thing, for it acts synesthetically and simultaneously along a whole series of dimensions such as sight and sound and touch and smell' (Tilley 1999, 267) This contrasts with the visual or aural and abstract means by which text communicates. This means that we may need to re-experience the multi-sensory nature of the original message in order to understand, though without the original contextual information even this may not be sufficient to allow anything like the original reception. This keys in with Gage's (1999, 112) observation that societies generally see many more colours than they have the words to describe – 'language is far less discriminating than perception'.

2.3.3.3 EMOTION-INDUCING OBJECTS

While the comparative emotional responses elicited by text and non-text are little studied outside their use in museums for the teaching of children, the results of those studies highlight the value of the object (Shu 1994; Borun 2000; Evans *et al*. 2002; Morrissey 2002; Campaign for Learning In Museums 2003). Hooper-Greenhill (2000, 112) states that encounters with the verbal and written require cognitive process, whereas encounters with objects are more than this, they can initiate a reaction, emotion, which cannot be articulated at the verbal level. Wiessner (1985, 164) also stresses the non-verbal information transmitted by artefact style. Text can also produce an emotional effect but the effect of the object is arguably more powerful. The term 'magical contagion' (Evans, Mull and Poling 2002, 72–73) has been used to describe the 'supernatural' nature of the object. This is the case particularly with artefacts removed in time or space from the receiver. There remains an intangible extraordinary

experience of a real object associated with the distant past, or distant place; it is almost magic and may be likened to viewing a religious relic (Graves-Brown 2008, 171).

Text can have a similar emotion-inducing effect, though arguably with less immediacy. The reading of ancient texts, in the same way as handling of ancient artefacts, may imbue the recipient with an emotional reality of the past. Of course when the text is also an artefact, that is, when the text was written in the past, upon an historic object as opposed to a photograph of an historic object with text written upon it, then the text, one would expect, has as great an effect as the ancient object.

'There is an ineffability about emotions and things, which avoids neat summation in words and which gives them a joint power' (Gosden 2004, 38). Emotions are too complex and powerful to be easily put into words (Gosden 2004, 38). The problem with any sense of message reliant on emotion is that without the original contextual detail it is difficult, if not impossible, to recreate. Text, being less reliant on emotion does not usually have these problems.

While it may be agreed that emotion is important in how artefacts communicate, the nature of the message is not easy to translate. The study of emotion in archaeology is little researched, though see Tarlow (1999, 22–37; 2000); Meskell (1996; 1999, 128–133); Gosden (2004). It may be relatively uncontroversial to claim empathy with past peoples losing loved ones, for example, because we assume that mourning is a universal emotion. However, much more specific contextual information, or indeed experience, is needed to understand emotional subtleties which may be linked with say fire, or with flint. And these aspects, although apparently banal, would not be immune from emotionally heightened messages. As Tarlow (1999, 30) states 'almost everything we do we experience emotionally as well as physically….'.

The linking of religion and violence has been suggested by Girard and Gregory (1977). Anthropologists have seen a sexual dimension to ritualized violence involving rites of passage (Bloch 1986, 1992). Male initiation rites of Papua New Guinea use violence to heighten emotion and ensure that the event is remembered (Whitehouse 1996).

There are extreme uses of flint which one might assume had the effect of heightening emotion through association with extreme violence or danger; the possible use of flint in human sacrifice, for example (**5.2.2.1**). We may also surmise that the dangerous aspects of flint may have been deliberately heightened through metaphoric connections with snakes and fire (discussed in later chapters), perhaps to increase the

power of the metaphor. While the actual witnessing of such metaphoric acts as killing using a flint knife, may have been enhanced through actually being there, we may assume that the textual, paler imitation, still served to reinforce it.

2.3.3.4 THE REALITY OF OBJECTS: RESULTS

The importance of touch and smell, of physically engaging with the artefact deepens its meaning. This emotional response can even make things with which the artefact may have been associated seem more real. Thus, artefacts can:

a. bring the past physically into the present (Chapman 2000, 30)

b. be used to verify a point

The two ideas often coexist. 'The 'thinginess' of objects, the concrete 'reality', gives weight, literally, to the interpretation. It 'proves' that this is 'how it is', 'what it means'." (Hooper-Greenhill 1992; Hooper-Greenhill 2000, 115). To actually have the proof of the thing, rather than thought or ideas concerning it, is important. An object considered 'real' is often inexplicably more important than a copy. Of course, the interpretation of the 'proof' is still subjective and related to context. As Hooper-Greenhill (2000, 115) explains of two different outlooks on seeing real Maori carvings:

> 'To Russell-Cotes, it was self-evident that Maori carving was grotesque. Other writers had said so, and on seeing the things themselves, so they were. To ngati Hinemihi one hundred years later, Hinemihi stood as the beautiful ancestor of the tribe as she had done for one hundred years. She affirmed the identity of the tribe, by being there 'in the flesh' as it were'.

This helps explain why objects as metaphors play a vital role. We might understand that an artefact belonging to a loved one does not really bring us to the loved in 'physical' sense but such an artefact can engender a powerful sense of nearness. We can assume that objects were eminently powerful in the past as heirlooms, as metaphors in graves, as elements of ritual.

2.3.4 RELIGIOUS TEXT AND ARTEFACTS

If one explores texts concerning flint (**Chapter 6**), it will be seen that they are all religious. One might, arguably, not include medical texts in these categories, however, modern commentators tend to categorize ancient Egyptian medical treatise as 'magico/religious' (e.g. Parkinson 2002, 62). Certainly, many contain what we may class as 'spells' and remedies apparently used by the 'gods', as in the Ebers Papyrus.

Others, however, such as the much later Brooklyn Papyrus 47.218.48 and 85, seem more akin to a technical handbook, though even here snakes are described as akin to Seth (Sauneron 1985, 155). The modern distinction between magic and medicine cannot be applied to ancient Egypt (Shaw and Nicholson 1995, 175). Magico/religious texts in particular seem to have used age to reinforce status (Baines 1983, 588) and some medical papyri claim an earlier ancestry (though in part the claim may be true Parkinson 2002, 55). Unfortunately there appear to be no 'secular' texts such as accounts or court documents which concern flint. Thus, it could be argued that mention of flint in ancient Egyptian texts does not reflect lived reality.

As for non-textual material, most evidence for religion comes from tomb and temple, much less from settlements (**Chapter 5**). The fact that most non-textual data comes from tomb and temple is problematic for the study of flint in ancient Egypt (**page 76**). What we can say is that artefacts found here are likely to concern religion (**Chapter 5**). The association of flint with such contexts is particularly dominant in the Early Dynastic though continues into the Old Kingdom. There is also evidence for use of flint nodules in New Kingdom domestic shrines (**5.2.2.2**). There is, however, little non-textual post-New Kingdom evidence for explicitly religious use of flint.

Artefacts concerning religious belief tend to be archaic, or archaising; these include funerary and temple artefacts and texts. References to flint in texts largely stem from such documents, with the possible exception of references to flint in medical papyri.

2.3.5 INTERRELATIONSHIPS BETWEEN TEXTUAL AND NON-TEXTUAL METAPHOR

So far, textual and non-textual messages have been considered separately, however, it is obvious that the two interact – language and material metaphor cannot be detached from one another. Textual metaphors surrounding flint do not appear in a vacuum but rather result from an entangled web of ideology and the artefact in praxis. The actual increase in text may affect the way flint, or any other metaphor, is considered as, the actual act of writing makes ideas more explicit (Goody 1986). One might even posit a deliberate use of metaphor by the elite. Kus (1992, 175), for example, has suggested that the construction of the state also meant an alteration in metaphor (though she uses the term 'symbol'). She posits that with the division of labour between intellectual and manual, the 'normative' or 'ideological' symbols (Turner 1974; 1978) had to be consciously created and manipulated by 'intellectual specialists' who would then map

them onto the routine, concrete products of the masses. While such mapping may not have taken place through the medium of text, its structure may have been reflected in text. The only time when we may expect more or less complete isolation in one area is perhaps in the post New Kingdom when flint seems little used in everyday life. Yet, as already stated, it is still referred to metaphorically.

An extensive exploration of whether or not the elite consciously controlled metaphors concerning flint is outside the remit of this thesis. One may speculate, however, that since flint knives feature heavily in literature, and during state formation, specialised flint artefacts are closely connected with the elite. Large, symbolic (iconic) flint knives are placed in elite graves at this time (**4.3.7.2**). Presumably, their large size signalled not only to other elite but to the masses. Furthermore, the association of flint with the tools of the gods, as suggested in literature (**Chapter 6**), and the association of gods and kingship, suggests that flint ideology was likewise bound up with kingship. Literature also suggests that flint is concerned with maintenance of order (**6.7.2**), again an area connected with kingship. One may assume that flint was one of the aspects of material culture manipulated by the elite.

One might also postulate that the factor of flint's salience in text at a time when it largely absent from the lived reality may be evidence of manipulation of nostalgia, possibly to claim legitimisation. However, if this was the case we might expect to see a late floruit of flint goods, themselves associated with the elite. This is not the case.

2.3.6 THE RESULTS OF DIFFERENCE

Taken as a whole, non-textual artefacts, because they engage with all strata of society, and because they transmit isochrestic messages, are better at representing a wider social range than are textual artefacts. The arbitrary connection between signifier and signified in text and the comparatively long apprenticeship needed to use text makes text a specialised technology. This factor means that text is easily controlled by a minority but also means it is less accessible to a majority. It also means that the agreed meaning of text is more likely to be precise. In opposition, artefact meanings are more likely to be multivocal. Condensation of meaning may also result from metaphor relating to the physicality of the object and its context, a factor particularly prevalent in the non-textual artefact. Finally, the physicality necessary for an understanding of non-textual artefacts means that the artefact tends to engender a more emotional response and one which heightens the sense of reality. Thus, on the one hand the non-arbitrary nature of the artefact means the object is less precise in its meaning but it also means

that the message may be more powerful and more widely understood. The differences thus summarised are however, largely of degree.

The implications for the Egyptologist, always divorced from the original context, are that the technology of understanding the symbols of text is relatively easy to unlock compared to the more imprecise nature of artefacts. This allows at least some understanding of the specifics of any ideology, for example, as is shown in this thesis, **Chapter 6**, the specific gods associated with flint may be uncovered.

Non-textual artefacts on the other hand, because of their more highly contextualised meanings and because of their multivocality, may be much more difficult to decipher. They are less precise. Thus, often we can only make an educated guess at the meaning intended therein, though the likelihood of the meaning being correct may be considered greater if repeated and projected across contexts (**Chapter 5, page 172**). Non-textual artefacts, because of their ubiquity are generally less likely to be subject to the aims of a narrow socio-economic group. The powerful emotional response sometimes engendered by artefacts helps explain their possible importance as heirlooms (**4.2.4**) and the power of physical properties such as hardness. The response to the artefact has a bearing on the study of lithics in Egyptian ideology, in that the physical presence of a lithic artefact in a past society could arguably be more powerful than a textual description of it.

Of course, success of different communication media depends not only on the message and the media themselves but also upon the receiver. It is now widely accepted by educational psychologists that different people learn in different ways. Some are better able to learn through a direct exposure to non-textual artefacts while others react more positively to textual information. One would assume that this has always been so, though perhaps with our increased exposure to the written word we have generally become desensitised to the object.

The way in which text and non-text communicates is vital for understanding metaphor. One would assume that if messages about and by flint are communicated both textually and non-textually they are mutually reinforcing. However, it must be stated that the messages carried by textual and non-textual artefacts need not be different ways of saying the same thing. ‘Solid metaphors are not substitutes for linguistic metaphors or translations of them into material form. They act most subtly and powerfully precisely when they are not linguistically translated, at a non-discursive level of consciousness and as part of the routinization of action’ (Tilley 1999, 263). Traditionally, the ideology of flints has been studied with regard only to

text. However, the differences between text and non-text clearly show that both supply different types of evidence. Therefore, using both types of evidence in combination must be the way forward.

It has also been argued that technology, largely meaning use of physical tools, is the easiest category to see archaeologically, with economy, social and political organisation and ideology travelling increasingly up the 'ladder of inference' (Hawkes 1954). Indeed, processual archaeologists have concentrated their efforts upon technology (Trigger 1989, 392). While ideology is not separate from technology (Pfaffenberger 1988; 1992; Lemonnier 1986, 1993; Dobres 2000; Michael 2000; Walker 2001; see Sillar 2000 for further references), and indeed writing is a technology (Moreland 2003), ideology is easier to see in textual artefacts. This is because of the generalizations stated above: text is iconic; more precise and less multivocal than non-text; it can be designed to convey complex and abstract messages over distance. Text concerning the magico/religious, an area in which flint is described, uses archaisms to enhance status. However, artefacts, it has been shown, wielded a great deal of power in their expression of metaphor and while their messages may have been multivocal they were certainly not inconsequential.

Chapters 4-6 demonstrate the different types of information available in constructing the ideology of flint. **Chapters 4 and 5** are largely archaeological while **Chapter 6** takes text as its starting point. It is clear that while archaeology can demonstrate the existence and possible meaning of ideological metaphors, text tends to be more precise and less multivocal. Text, perhaps because it is more abstract from situation, is also better able to explain that which is not physically present, such as deities. However, as is shown in the **Chapters 4 and 5**, and above, non-textual artefacts are extremely powerful, and thus, although they may not elucidate the specifics of ideology, with the precision of text, they can hardly be ignored.

2.4 CONCLUSIONS

There are three main conclusions to this chapter:

1. Ideology is a polythetic set of which metaphor is an important factor
2. Metaphor is vital in understanding ideology and moreover, through examining the messages carried by text and archaeology as metaphor we may be able to see the birth and rebirth of metaphoric use of flint

3. Metaphors of text and non-text are significantly different in constitution and methods of engagement with the world. Therefore, without examining both, our understanding of ideology remains incomplete.

3. FLINT DECLINE

> Sometimes metaphorical condensation will be greatest in artefacts such as Yekuana basketry…or Wala canes…utilized in virtually every aspect of daily life. In other cases those artefacts with broad meaning ranges may only be seen and used infrequently in specific ceremonial or ritual contexts.
>
> Tilley (1999, 266)

3.1 INTRODUCTION

Elsewhere in this thesis I explore the changing ideological use of flint in three areas: a) its physicality b) its context and c) its use in text. This chapter deals with its changing utilitarian use. One would expect the two to be connected. The first section of this chapter outlines a basic methodology for studying flint decline and the second section discusses the results. Unfortunately, there have been few systematic studies of how one may measure flint decline, though it is often discussed obliquely. Therefore, it has proved necessary to draw up a methodogy. In this chapter, I see skill as an important measure of flint decline.

Why study flint decline?

As stated in **Chapter 1**, this thesis aims to explore the ideology of flint against the background of its kinetically utilitarian decline. It may be believed that utilitarian decline is already understood. It is my contention that this understanding is sketchy and often assumed; it has never been explicitly explored. In this chapter I aim to take the first step toward putting that right.

Measurement of flint decline is a necessary step in understanding whether commonplaceness in culture equates to ideological importance. At first glance the answer may seem obvious. It might be assumed that a ubiquitous material would be more likely to be used metaphorically because every artefact is part of a wider web of artefacts, social contexts, technologies, environments and cosmologies and one would assume that a commonplace material is integrated into a wider context. As Dobres (2000, 116) explains of 'everyday' technologies – 'it is by virtue of their being mundane and seemingly innocuous everyday sorts of technical activities and items of the kind almost everyone is able to understand, fabricate, and use, that they are especially fertile ground for symbolic and political manipulation'. One might expect

artefacts which are core symbols/metaphors, providing metaphors in various contexts (Tilley 1999, 30–33), to be commonplace. However, one could alternatively argue that is the rare and exotic which is likely to be used in religion (**4.4**).

Published Egyptological lithics specialists have described the decline of flint based on familiarity gained through visual study of the material. I discuss these below. I do not argue in general with their statements (**3.2.1**), and indeed test this means of measuring flint decline through my own observations (**3.3.1**). Nevertheless, a more metrical methodology for measuring the decline of flint working in Dynastic Egypt would be useful, if only to confirm such deductions. Additionally, while skill levels generally decline from the Old Kingdom onward, flint knives and arrowheads continue to reflect high skill levels into the New Kingdom, a niching which has not been explicitly explained by previous scholars.

3.2 Methodology for Measuring Decline

Flint decline has been briefly studied for cultures other than Egypt. As will be seen various scholars have studied Bronze Age flint and measured changes in width and thickeness of blades, numbers of blades, weight of tools in differing assemblages, number of bifaces, etc. The results are frequently attributed to the introduction of metal. However, there appears to have been no systematic critique of the different methodologies. Moreover, it will be shown that several methodologies use factors which can be summarised as measures of skill, though few explicitly use the term. While skill would appear to be important in understanding flint decline it has remained a nebulous term.

Problems

The ideal database for a study of flint decline would be recently excavated material from large variety of sites, studied at first hand. However, this is not possible. Instead I used: some 1766 artefacts from British museums; reports describing excavated material; 342 finds cards from recent excavations at Memphis and my own studies of 168 recently excavated lithics from Panhesy's House at Amarna (**maps 3 and 5**; Graves-Brown 2009). There are problems with each data set but all taken together reduce shortcomings.

Of museum material, only British collections were studied due to resource limitations, though material from British museums is likely to be representative of

material held by museums outside Egypt[15]. There are 4 main problems inherent in using any museum collection:

1. Museum collections were selected by excavators and collectors successively, from samples of available material, and thus do not accurately correlate with excavated material. Attractive and obviously worked examples were chosen while simple flakes discarded. Even excavators such as Petrie, who stressed the importance of collecting everything, only actually selected the 'best' (Petrie 1900a, 164).

2. Most sites targeted for excavation were those containing the 'best' material in terms of late 19th century and early 20th century collecting strategies; these sites were predominantly funerary. Flint from domestic and funerary sites might be very different. Flint knives for example, are only commonly found on funerary sites dating up to and including the mid-Old Kingdom, but are found on settlement sites until much later.

3. Excavators may not have recognised flint tools, especially if expedient and thus apparently too 'crude' to be human-made. Debitage and roughouts would thus have been rejected. Until at least the 1980s Egyptologists rarely collected and recorded all tool types (Conard 2000, 24).

4. We have the problem of incorrect assumptions by excavators, for example, flint in late contexts might be disregarded as 'obvious' context contamination. Finally, dating of museum material is sometimes based on typological considerations only.

As existing typologies for Egyptian flint are at best preliminary, material should not be dated on typology alone. My difficulties in constructing a reliable typology (**Appendix 1**) included: quantities of material from multi-period or controversially dated sites; lack of recorded intra-site context, or even worse, no provenance at all (in latter cases excavation marks occasionally allowed the linking of material to site reports or notes). Unfortunately therefore, much museum data had to be ignored.

Published data is also problematic. For example, even recent publications very often do not describe factors which would be useful to measure skill. Very often there are no pictures (e.g. Werschkun 2007 and 2007 b), so that one is not clear of the type. Measured attributes are largely incomparable across reports. It seems likely that published data does not necessarily record all flint material, because of the problems related to excavation discussed above. Nevertheless, I believe published material produces a useable indicator of the general range of tool types and provides some

[15]I base this assumption on conversations with colleagues from museums in Europe.

indication of relative tool numbers.

In addition to generally available published information, in this thesis I also consider the lithic material recently excavated from Memphis, from a preliminary report in Giddy (1999, 226–243) supplemented by the excavation cards which included drawings. While I did not have access to the actual artefacts, this collection included some 342 reasonably well documented and dated finds.

Finally, my own studies of 168 excavated flint artefacts from Amarna (**maps 3 and 5**) have been considered (Graves-Brown 2009). It is possible that data sets from two recently excavated sites both of largely New Kingdom material might bias the results, therefore they were not included in several diachronic comparisons such as counts of artefacts by period.

Various methods could be employed to measure the degree of kinetic use of a material. Several of these I have rejected:

1. One might measure the degree to which flint appears in published Egyptological literature or is shown iconographically. The problem here is that later flint tools tend to be expedient and un-aesthetically pleasing and are therefore ignored by commentators, especially those not trained in lithic analysis[16].

2. One might measure take-up of metal and assume a negative correlation with flint. However, the assumption of an inevitable and simple replacement of flint by metal is no longer considered tenable in other disciplines (Rosen 1996; 1997). Besides, as metal is recyclable, its absence in the archaeological record does not equate to absence in original ancient context. It makes more sense to measure flint directly, especially as it is almost indestructible (Ford *et al*. 1984, 158).

3. Stocks (1988; 2003) examined the micro-wear patterns resulting from working materials with flint and metal, and used experimental work to replicate the pattern and thus ascertain if flint or metal tools were used. I have not replicated his experiments for pragmatic reasons. However, I have examined his results regarding flint use.

[16]It is still not considered imperative for Egyptologists to receive training in material culture, and very few are trained in lithic analysis.

Measures of decline used

I use six measures of decline:

- Observation based on familiarity with the material
- Measuring tool quantities
- A qualitative assessment of skill levels in production
- A quantitative analysis of variability as defined by typological analysis of morphology
- Growth in expedient technology
- Micro-wear analysis carried out by others

3.2.1 OBSERVATION BASED ON FAMILIARITY WITH THE MATERIAL

As stated above, several experts have considered flint decline based on familiarity with the material rather than any metric measurements. Such observation cannot be lightly dismissed.

Petrie (1891, 34) in describing finds at Gurob (**maps 3, 4 and 5**) from the 12th and 18th Dynasties wrote 'In the XII dynasty flint chipping was an art, highly skilled, producing on the fine translucent material very beautiful work (Pl.XVI); and, though influenced by the form of bronze tools, yet by far commoner than metal work. In the XVIII dynasty all this is reversed. Very few flints at all appear; what there are show unskilled work on poor material (Pl.XVI). The art was expiring.'

Over 100 years later Hikade (1999, 47) saw the second half of the Fourth Millennium as the peak of skill in flint use followed by a slight decline in the Early Dynastic. He further notes that specialized craftsmanship probably came to an end in the First Millenium B.C., though *ad hoc* tools were still produced (Hikade 1999, 49). Tillmann (1999) sees the use of flint, in particular sickle blades, continuing for longer in Egypt than elsewhere in the Near East. He states that bifacial knives continued until the New Kingdom, and that from the New Kingdom in particular tools become coarser. However knives and sickles both continue until the 25th Dynasty.

3.2.2 MEASURING TOOL QUANTITIES

In order to measure flint decline, Rosen (1997) measured quantities of lithics diachronically from recent excavations in Bronze Age Levant. He used weight of

material rather than tool numbers and had the advantage of plentiful and recent data[17]. Because of the problems regarding museum material described above, for my data this is perhaps the most unsatisfactory of the five selected methods of measuring flint decline. However, I have included it while recognising its limitations.

3.2.3 SKILL

Here I discuss:

- Definitions of skill
- The relationship between skill and flint decline
- How skill may be measured

In other disciplines, attempts to measure flint-decline sometimes employ measures of skill, though not always specifically using the word 'skill'. However, few researchers actually question what skill is. I define skill as technical artistry achieved through familiarity with a material.

3.2.3.1 WHAT IS SKILL?

Until the 1990s, analysis of skill was largely ignored or was dependent on subjective criteria (Costin 1991, 39; Roux *et al*. 1995, 64; Roux *et al*. 2005). Since 1995 there has been a significant increase in the literature on the subject though it still remains a nebulous area. For this reason I explain what I see as skill. Basically, skill involves familiarity with the material and concerns doing rather than theoretical knowledge.

Skill is technical artistry, it lies not in figuring out, or conscious know-how, but in doing and thus depends upon familiarity with the material (Ingold 1993, 343; Ingold 2001). As Roux and Bril (2005, 4) explain, there are two types of knowledge. The first is procedural, dealing with motor skills and is largely implicit hence unconscious. The second is declarative and conscious. We are not so much concerned about 'know-how', for example understanding the necessity of preparing a platform in knapping; rather the concern is with 'know to' or practice (Dobres 2000, 120 with references), as in the actual ability to successfully strike a long, feathered blade from a core.

Although both know-how and skill (know to) are necessary for a positive outcome, and are therefore inseparable, the former may be learnt relatively easily, the latter is more difficult. To some extent both show familiarity with the material but the

[17] He may possibly be criticised for weighing the material as opposed to counting tools but the use of recent data is obviously an advantage over my data.

fact that the latter takes more time to obtain makes it a more useful measure of familiarity.

3.2.3.2 SKILL AND FLINT DECLINE

Skill and technological decline are related but the relationship is not simple.

Ford *et al*. (1984), in a quantitative and qualitative study of tools in Bronze Age Britain found that as evidence for metal manufacture increased, skill in lithic manufacture decreased. This study did not specifically use the words 'skill' but rather 'degree of control' (Ford *et al*. 1984, 162–164) i.e. the knapper's ability to detach fine, sharp flakes, with few end fractures (in other words, skill by another name). Humphrey (2004, 247–248) also notes skill reduction in the British Iron Age. She does not define skill but does give indicators of its presence discussed below.

However, not all studies support a simple decline in lithic-working skills in response to increased metal use. Indeed, several scholars report an initial increase in skill concurrent with the introduction of metal. For example: an initial skill increase in length to width ratios in blades and increase in standardisation, occurred in the Neolithic to Early Bronze Age transition in Greece (Torrence 1979; Carter 1997); in Andulasia blade regularity improved in the Copper Age, though later declined (Martinez-Fernández 1997); for Lerna, Greece there is a general pattern of continuity in skill measured by thickness of blades and typological range throughout the Bronze Age (Hartenberger and Runnels 2001, 280–281), though Runnels (1985) shows that while there is general consistency there is also an increase in flakes and corresponding decrease in blades. Blades become thicker and wider.

Various reasons have been suggested for the correlation between skill increase and initial metal introduction. Torrence (1979, 74) suggests it is due to metal restricting lithics to a limited range of jobs; those requiring only thin, sharp-edged tools and/or specialisation. Martinez-Fernández (1997) suggests an increase in copper mining coincided with an increase in flint mining which led to increase in skill in lithics. However, Migal (2004, 222) suggests that skill declined (he does not use the term skill, though it may be inferred) in locally produced flint tools from the Early to Middle Bronze Age Poland, though is present in imported items. He sees this as due to an increase in flint mining which led to ubiquitous flint. Flint objects, once associated with prestige, were common utilitarian tools, while at the same time highly specialised tools were imported.

As these examples show, there is no inevitable pattern or explanation in skill

levels for Bronze Ages. Nevertheless, it does seem that at least after the initial introduction of metal and short-lived improvement in knapping, skill level declines.

We need to be aware however, that evidence of skill is not only influenced by flint decline but also by the following:

- The social role of the tool
- Economics, particularly efficiency
- Minorities such as specialists, apprentices, etc. producing quantities of material
- Limitations of the existing archaeological record
- Type of tool and raw materials

These factors can be interrelated. For example, Carter (1997) sees increase in skill as due to specialisation caused by decrease in raw materials. I consider each in turn.

3.2.3.3 THE SOCIAL ROLE OF THE TOOL

Generally, skill may relate to the social purpose of the tool with prestige and ritual items exhibiting more skill and tools which were not considered important exhibiting less skill (**4.4**).

Various scholars have shown that prestige goods tend to exhibit more skill: see Edmonds and Thomas (1987) for British material; Karlin and Julien (1994, 159–160) for French Magdalenian flint; Sievert (1992, 12–13; 1999, 61-62) for the Maya. See also Olausson (1998). In ancient Egyptian too, there is evidence that particular tool types and tools exhibiting particular skill were restricted to the elite (**5.2.3**).

As is stated in **Chapter 4**, it is suggested that there is a relationship between wealth, prestige and ritual, but furthermore that some direct indicators of skill for example, bifaces, may also relate to ritual. The evidence for ritual lithic items exhibiting skill is particularly evident for Early Dynastic Egypt where large bifacial flint knives are found in ritual deposits (**4.3.7.2**). However, for later periods there is no evidence for the link. In fact, the flint tool found with an execration deposit at Mirgissa was a simple blade (**maps 2 and 9**; **5.2.2.1**). Perhaps in later periods, the material rather than form was important.

Related to this is the question of *ad hoc* or expedient tools, that is non-formal tools not requiring a great deal of skill in manufacture (see Parry and Kelly 1987, 286–289 for further characteristics of this technology). The degree to which flint decline is related to expediency is discussed in more detail below (**3.2.5**). Here I simply state that

evidence for skill is also affected by the degree to which a society places value on formal shapes, and this may vary. Informal shapes, i.e. *ad hoc* tools, do not necessarily mean that a material is unimportant, that it is in decline. The social role of the tool may not always manifest in its shape. However, as will be discussed below, because of the nature of Egyptian culture one would expect that in ancient Egypt social role was related to form.

3.2.3.4 EFFICIENCY

Making efficient use of raw materials without wastage is arguably closely connected to skill (Bodu *et al*. 1990, 152; Hartenberger and Runnels 2001, 267–268). However, because it is difficult to measure efficiency with the material available, and because of the problems of assuming the Egyptians strove for efficiency, I have therefore chosen not to measure efficiency *per se*, though recognise its link with skill.

Efficiency is linked with specialisation (Torrence 1986, 157–162; Hartenberger and Runnels 2001). However, efficiency is additionally linked to competition (Costin 1991, 37–39) and situations where the aim is to produce large quantities at low cost. Thus, as Clark (1987, 271–272), has suggested, blade technology only makes sense where it is necessary to produce many more tools than needed by a single household. Efficiency is also a factor of availability of raw materials. I discuss factors affecting availability of flint, this thesis, **4.4** and **5.2.3**.

We have to be careful of not projecting a capitalist view on the past, assuming a universal desire for lack of waste. There are opposing views concerning the general 'economic aims' of the Egyptians and their desire for efficiency. Janssen (1975a and 1975b) shows the Egyptian generally lacked economic awareness, though he does not deal specifically with efficient exploitation of raw materials. Kemp (1989, 252) however, does not believe that the Egyptians were so different from us and affirms his belief that they wanted to get a 'good price' for their investment. However, he also states (Kemp 1989, 125) 'It is typical of the ancient lack of interest in the idea of efficiency that standardization does not seem to have been a conscious goal'. Even if the Egyptians wished to maximise output per capita, we cannot say that they were as attuned to the efficiency ideal as post-Fordian societies. For example, it is clear that in pottery production, the Egyptians used several small kilns, each with its own team or workers rather than one large, more efficient kiln.

Assuming that efficiency relates to skill for Egypt, how may we measure it? Refitting and platform preparation may show efficient use of cores. Unfortunately,

refitting is not possible for most material in British museums. Hartenberger and Runnels (2001, 268) measure workshop efficiency by presence of blade core trimming pieces, such as crested blades (lames à crête), and frequency of blades with trapezoidal versus triangular cross-section. Trapezoidal blades indicate thorough use of cores. However, for Egypt we have few clearly identified workshop areas (**Appendix 1.2**).

3.2.3.5 SPECIALISATION

Specialisation and skill are interrelated. Skill is an indirect indicator of specialisation (Costin 1991, 39) and since one would expect both within a complex society where flint is widely used, there seems no problem in conflating the two.

However, decline in specialisation does not necessarily equate with general flint decline. For the Levant, decline in chipped stone was accompanied by increased specialization and changes in distribution, probably more related to 'evolution of social complexity than to technological developments…and thus may have influenced the adoption of metallurgy' (Rosen 1996, 131, 153 note 1). Rosen recognised evidence for increased specialization in: distribution variability between different core, waste and tool types and the discovery of primary and secondary workshop sites with some elements being manufactured on site and others being imported (Rosen 1986, 1987, 1988b, 1989b. See also Torrence's (1979) work on Early Bronze Age Greek obsidian, and Martinez-Fernández (1997) for Andulasia, Spain. In these cases specialisation is seen as the reason for skill increase against a background of decline in flint use.

However, in societies where there is a high degree of specialisation in several technologies, including flint-working, one would assume that decline in flint specialisation was a factor of the decreasing importance of flint, at least in the realm of prestige (i.e. it may still have been important as a utilitarian material).

Torrence (1979) suggests that two traits indicate specialisation:

- Restricted access to raw materials
- Technological efficiency

Roux (1990, 145) defines three types of data that suggest specialisation:

- Quantitative criteria; workshop productivity; producers to consumer ratio

- Spatial criteria; intra- and inter-site distribution, spatial organisation of the chaîne opératoire, regional diffusion
- Qualitative criteria; function, product standardisation, or the emergence of 'microstyles': i.e. craftsmen's marks which would enable us to distinguish individual productions

Different levels of skill within one assemblage may be due to 'laziness' among certain groups or may indicate apprentices (e.g. Pigeot 1990; Roux 1991; Karlin and Julien 1994). However, since such groups would be consistently present through time, they should not bias the results.

3.2.3.6 LIMITATIONS OF THE ACHAEOLOGICAL RECORD

Some problems relating to the archaeological record have been outlined above. Additionally, we have the problem that the tool in the archaeological record represents only the final stage in the chaîne opératoire. This means that an originally skilfully made tool may appear less skilfully made due to re-use and resharpening. A shortage of flint may lead to longer curation of implements, though one may assume that shortage of flint tools in a country where the material is abundant equates to a decline in flint use.

3.2.3.7 DIFFERENTIAL ACCESS TO RAW MATERIALS

To some extent the type of tools manufactured, and thus level of manifested skill, depends largely upon available raw materials. For example, one cannot make bifacial knives from small river pebbles. The raw materials available and selected in turn depend upon various geological and social factors not necessarily related to metal production.

In Andulasia morphological blade regularity and size increased in the Copper Age compared to the Neolithic (Martínez-Fernández 1997) suggesting an increased level of skill. However, the result may have been partly due to intensification of flint mining; flint is made more available allowing larger, more regular blades. The intensification of mining may have been caused by changes in the structure of society, not simply supply and demand.

Like Early Dynastic Egypt, the Andalusian Copper Age sees the use of standardised blades with regular prismatic morphology and a high degree of parallelism between edge and ridge. This requires careful platform preparation. The

numbers of prismatic blades then decline after this Copper Age *floruit*. Thus, in Andulasia, though we may see a skill decline during the Bronze Age there is an early *floruit* which needs explanation. Indeed, the Andulasian example appears, on the surface, similar to Bronze Age Egypt with early increased skill levels followed by a decline. It is difficult to know if increased skill in Egypt was due to intensification of mining brought about by social change, but the association of kingship with prospecting (**5.2.3**; **Chapter 7**) suggests it may have been the case.

Aegean Early Bronze Age prismatic blades are usually seen as the pinnacle of achievement within the Bronze Age tradition (Carter 1997, 538), better than Neolithic examples. There are, according to Carter, three reasons usually given for the Early Bronze Age achievement:

1. A natural evolution of skill via practice over time in search of 'the wonder-blade at the end of the rainbow' model

2. A measure of self-imposed efficiency to combat the appearance of metallurgy

3. Enforced need for efficiency of raw material processing due to the greater costs of procurement in the Early Bronze Age compared to the later Neolithic.

For Carter (1997, 539) the third model holds the greatest respect. Prismatic blade production is, as he sees it, the result of technological improvement due to economic forces. High instances of mistakes in Neolithic blades led him to believe that production was not specialised. However, Carter (1997, 541) believes prismatic blade production was a specialised activity, forced upon specialists by difficulty of obtaining raw material.

3.2.3.8 MEASUREMENTS OF SKILL

Although I have explained what I see as skill, a closer examination of the definition can suggest ways to measure it. Ingold (2001) draws attention to five points which he considers important in technical skill. As I understand him:

1. Skill involves the tool and the mind and body of the agent working together
2. Thus, skill is not, contra Mauss (1979 [1934]), simply a technique of the body, but rather demands a holistic approach
3. Skill involves care, judgement and dexterity
4. As skill involves these continual sensory corrections it is not a formula which can be passed down. Skill does involve observation and imitation but requires practice so that one gets the 'feel' of the thing
5. Finally, the activity itself generates the form.

Of Ingold's five points his third is particularly pertinent to this thesis. Skill involves care, judgement and dexterity or precision and prediction. Ability to control one's movements accurately only comes with practice. Therefore, ability to accurately deliver a blow may reflect kinetic embeddedness.

Prediction and judgement, the ability to think ahead and spatially understand an object is usually considered a matter of intelligence and something which an individual is predisposed to, or not. Nevertheless it can be improved with practice and is therefore a learned skill.

I now consider various ways in which care, judgement and dexterity may be seen in the artefact. Certain possibilities were rejected.

3.2.3.9 REJECTED MEASURES OF SKILL

- aesthetics and complexity
- chaîne opératoire and core morphology and debitage
- thick, wide striking platforms (**glossary**)
- lack of cortical (**glossary**) remains
- clustering of scar patterns (**glossary**)
- standardisation
- attributes recorded by anthropologists

AESTHETICS AND COMPLEXITY

Skill and aesthetics are often confused. An extremely long blade may be as difficult to produce as an average tomb painting. Yet the latter is popularly considered beautiful, thus a product of skill. The former is less likely to be considered skillful. Similarly, complexity is sometimes misconstrued as skill. Complexity includes factors such as number of production stages. An object of little complexity could exhibit a high degree of skill. Again, a long thin flake may not be particularly complex but it does exhibit skill.

This is not to say, of course that beautiful and complex artefacts can not also demonstrate skill. A ripple-flaked knife is popularly considered beautiful, it is certainly complex to produce and exhibits skill.

CHAÎNE OPÉRATOIRE, CORE MORPHOLOGY AND DEBITAGE

A chaîne opératoire methodology involves analyses of operational sequence in tool manufacture and can be understood to include environmental and social influences (Sellet 1993; Graves 1994; Geneste and Maury 1997; Dobres 2000, 164–211; Shott 2003). It is a holistic approach and invariably includes debitage evidence. Work on the Magdalenian of the Paris Basin convincingly uses chaîne opératoire methodology to distinguish skilled from unskilled workers (Ploux 1989; Pigeot 1990; Bodu *et al*. 1990; Karlin *et al*. 1992; Karlin and Julien 1994). While not using this method, Humphrey

(2004, 247–248; following Young and Humphrey 1999, 232–233), lists irregular core morphology and a high instance of chips and chunks in debris as markers of lack of skill. However, such close examination of chaîne opératoire or of debitage analysis is largely impossible for British museum collections where cores and debitage are rare.

THICK, WIDE STRIKING PLATFORMS

Humphrey (2004, 247–248; following Young and Humphrey 1999, 232–233) also lists thick, wide striking platforms as a marker of low skill. Striking platforms are not used as a measure of skill in this thesis because: they rarely appear on material due to secondary retouch or breaking of blades; where they do occur they are often on finely made blades and are generally very small.

LACK OF CORTICAL REMAINS

Ford *et al*. (1984, 162–316) considered cortical remains a reflection of lack of care and Winton (2005, 112) considered it marked lack of skill. This assumes that cortex (**glossary**) was unvaryingly undesirable in finished products, something we cannot know. For example, retention of cortex was arguably desired in parts of north Eastern Neolithic Europe as an indicator of the origins of raw material (Rudebeck 1998).

STANDARDISATION

Standardisation has been used as a measure of skill by scholars of the Palaeolithic (for example Winton 2005, 114). Runnels (1985, 375) notes that the width of blades varies more in Lerna IV (Early Helladic III) than Lerna III (Early Helladic II). Standardisation has been measured at Lerna (Hartenberger and Runnels 2001, 266), Teotihuacan, Knossos and Phylakopi (Torrence 1986, 157–162) and Britain (Winton 2005, 114).

While standardisation may be the result of several factors (Hartenberger and Runnels 2001, 266), including: government regulations or group affiliation (Hodder 1982b); consumer demand or functional need (Hartenberger and Runnels 2001, 266); or craft specialisation (Torrence 1986, 157–162; Kardulias 1992; Hartenberger and Runnels 2001, 266), it nevertheless displays skill in that practised unconscious motor habits are more likely to result in production toward a desired norm. Also, routinised action may result in cost-cutting strategies (Costin 1991, 33) which tend to standardisation (**3.2.3.4**).

There are problems in using standardisation to measure skill. We cannot be sure if blades within a population were intended for the same purpose and so could unwittingly be comparing a variety of tool types. Additionally, standardisation should be measured within workshops (different workshops may have had different standards). The problem is that we can rarely differentiate workshops for Egypt (**3.3.4.7** and **Appendix 1.2**), though one notable exception where standardisation equates with workshops is the Ramesside workshop at Qantir (**maps 3 and 4**; **3.3.4.7**).

CLUSTERING OF SCAR PATTERNS

Analysis of modern biface knapping shows that 'degree of skill, practice, and experience of a knapper will influence the "tightness" of his cluster of scar patterns' (Gunn 1975, 60). However, Gunn's analysis only considered 'handaxes' and would not be applicable to Egyptian flint knives. Additionally, the methodology called for equipment which was unavailable for this thesis (laser diffraction apparatus) and entailed procedures which were potentially harmful to the object (tracing scar patterns).

ATTRIBUTES RECORDED BY ANTHROPOLOGISTS

There have been several studies of skill centred on modern populations (among them Roux *et al*. 1995; Biryukova *et al*. 2005; Roux and David 2005; Stout 2005). Unfortunately these employ data which is not easily identifiable archaeologically (such as recording of socialisation or measurement of motor skills).

3.2.3.10 ACCEPTED MEASURES OF SKILL

- blade length and thickness
- biface size
- symmetry and regularity
- finely made bifacials
- mistakes

BLADES, LENGTH AND THICKNESS

Cross-culturally, blades decrease numerically in the Bronze Age and become wider and thicker (Healy 1981; Runnels 1985). Generally, blades are more difficult to produce than flakes and are used to distinguish skilled from unskilled workers (Parry and Kelly 1987, 285; Ploux 1989; Bodu *et al*. 1990, 148; Pigeot 1990; Karlin *et al*.

1992; Karlin and Julien 1994). Humphrey (2004, 247–248; following Young and Humphrey 1999, 232–233) saw short, thick flakes as a marker of lack of skill. It is possible that blade making, because it required special skills, was associated with ritual practices which in themselves would require skill (see Clark 1987, 268–269 for references to this cross-culturally). Such rituals would not necessarily leave any trace.

The longer the blade, the more the skill required (Pelegrin 1988, 47; Pigeot 1990; Pétrequin *et a.l* 1998, 306). Blade length and thickness was used by Edmonds (1990, 64) to measure skill at Cumbria.

Pressure flaking (**glossary**) to produce long, regular blades is also said to indicate skill (Perlès 1989, 11). This is not the case for bladelets (Pelegrin 1990, 124). However, pressure flaking is not necessarily easy to identify. Tixier (1984, 66 cited by Conolly 1999, 25) says that while one cannot be certain as to whether or not pressure flaking takes place there are four indicators of it:

- parallel sides and rectilinear arrises
- consistent thinness in the middle part without abrupt variation
- absence of pronounced ripples (**glossary**) on the ventral side
- the bulb is always narrower than the maximum width

Crabtree (1968, 451) also adds 'tiny platforms' to the list. Unidirectional blade removal from the core is also (from evidence of the rippling on blades) in keeping with, though not exclusive to, pressure flaking (Inizan *et al*. 1999, 78). A pronounced bulb may suggest hard hammer, though this deduction is by no means certain (Andrefsky 1998, 115–116) Moreover, it is difficult to differentiate a pressure flaked piece from soft hammer (Andrefsky 1998, 115; Andrefsky 2001, 7–8). See also Owen (1988, 3–7) for a summary of work discussing whether or not mode of removal from the core can be identified by flake/blade attributes.

I have not, therefore, indicated whether or not individual blades are pressure flaked though comparison of types from different periods suggests that it may be possible to make an 'educated guess', this is discussed in the results, below. Additionally, patterned pressure flaking as on ripple-flaked knives (Midant-Reynes and Tixier 1981; Kelterborn 1984) is easily identifiable and thus is measured in this thesis.

Relative incidence of blades versus flakes, and their thickness and length were measured. Relative thickness of the bulb was assessed by measurement at three points

(at a quarter of length from one end, half the length and three-quarters along from one end). The width was similarly measured.

BIFACE SIZE

It has been noted that less skilled knappers produce smaller bifaces than the skilled (Stout 2002, 706–709; Winton 2005). Thus, for this thesis, biface sizes were compared diachronically.

SYMMETRY AND REGULARITY

It is generally agreed that regularity and symmetry are measures of skill (Roux 1991, 51) for bifaces (Winton 2005, 111), blades and flakes (Fischer 1990, 460). Others claim that irregular flakes and blades, and varied positions of ridges on dorsal surfaces (**glossary**) suggest work on raw material did not proceed in a regular manner (Edmonds 1990, 64). There are problems in equating regularity and symmetry with skill. In the initial stages of nodule reduction during blade production, the resulting debitage/blades are more likely to be irregular than later blades. There is a further problem, in that symmetry might not be valued in a society and thus may not equate with skill. Ancient Egypt, however, seems almost obsessionally fond of symmetry.

How then can symmetry be measured? It is extremely difficult to judge symmetry objectively (Ford *et al.* 1984) as the observer is influenced by the length of the blade. Additionally there is the complication of the fact that the overall symmetry may be perfect while the arrises are not parallel. In order to decrease subjectivity, symmetry was rated for all blades on the same day from photographs (measuring over time means the measure is more dependent upon the mood of the observer on that day). Only complete or apparently almost complete blades were assessed. ‘Razors’ were not included as they are by their nature regular.

FINELY MADE BIFACIALS

Bifaces generally require manufacturing skill (Parry and Kelly 1987, 288), and ultra-thin examples require particularly high levels of skill (Root *et al*. 1999, 144; Winton 2005, 111). The thin, finely made bifacials from Early Bronze Age Poland are attributed to specialized knappers by Migal (2004, 216). Callahan (1979) reported that he achieved width to thickness ratios for bifaces of greater than 10:1 only after much practice and a high quality tool stone (Callahan was experimenting with width to thickness ratios of between 10:1 and 20:1).

The finely made bifacials of ancient Egypt include knives, *psš-kf,* daggers, spears, arrowheads and flint bracelets. These types are also sometimes a response to non-utilitarian need for the objects – they may be too fine for robust use (**4.3.4**). For knives, knapping skill may be compared in width to thickness proportions of the knife (Migal 2004, fig. 24.1). For Egypt, knives are the only bifaces which cross several periods, therefore for this thesis thickness of knives was measured and compared.

MISTAKES

All other things (such as quality of raw material) being equal, mistakes in manufacture may indicate lack of skill. However, mistakes may also be a result of mass-production (Costin 1991). Various studies link mistakes to control over material or skill: Ford *et al*. (1984, 262–3) counted end fractures; Torrence (1986, 161) and Humphrey (2004, 247–248; following Young and Humphrey 1999, 232–233) counted hinge fractures (**glossary**) to measure specialisation; Hartenberger and Runnels (2001, 268–269) looked at error rates and differentiated between 'minimal' and 'severe' hinge fractures. Sheets (1978) used errors to measure knapping efficiency.

Ideally we should compare error rates only among identical technologies with the same raw materials (Torrence 1986, 161). One will expect more mistakes in attempts to produce a long blade compared to an irregular flake. Additionally, as stated below, certain mistakes may not be important in certain technologies.

There is a problem with the material from British museums in that we cannot be certain whether lithic findspots represent knapping or use-sites, or both (there is evidence for Early Dynastic Egypt that certain blades may have been knapped in or close to burials). It is possible that pieces with mistakes were discarded at knapping sites. While mistakes are mistakes, whether found on knapping or use-sites, one might expect them to be selected out for use-sites. Thus, an apparent increase in mistakes may simply represent an increase in knapping sites, not a decrease in skill.

Mistakes may manifest in several ways. I have only measured hinge fractures in this thesis as overshot fractures may also be due to rejuvenation techniques. Since difference between 'minimal' and 'severe' hinge fractures is arbitrary, I did not differentiate between the two. While recognising that even skilled knappers produce hinge fractures, it is assumed that more fractures are produced by unskilled knappers.

3.2.4 TYPOLOGICAL RANGE

Outside Egyptology, lithicists have described a decrease in type range as metal is introduced. Potentially, this observation could be used to measure Egyptian flint decline. The first step is to draw up a typology. Egyptologists have used a variety of classification systems for flint artefacts, but these usually relate to individual sites or individual types. There is no overall synthesis. This problem is addressed by the typology I have drawn up in Appendix 1, summarised below (**3.3.3**).

Decrease in range of flint tools during the Bronze Age has been noted for Valencia, Spain (Jover-Maestre 1997, 734–736); Britain (Healy 1981; Ford *et al*. 1984; Humphrey 2004, 248); and the Levant (Rosen 1996, 131, 138–145; 1997, 155–159). However, as stated above, for Bronze Age Lerna, Greece, typological range was remarkably consistent throughout the Bronze Age (Runnels 1985; Hartenberger and Runnels 2001).

Various reasons are cited for typological decrease. For Britain, researchers saw this as a simple replacement of flint by metal. Runnels (1985), suggests that flint use is predicated simply upon distance from metal sources. Thus, range decreases for those items which are economically easy to replace in metal.

Perhaps the situation is more complex, with social factors impinging on the technological and economic. Sickles continued to be used in the Levant long after the introduction of metal (as in Egypt), partly as, until the introduction of iron, there was no real utilitarian substitute for flint sickles, and partly because farmers using such items would be among the last to benefit from new technology (Rosen 1997, 163).

Introducing a new technology does not cause an overall and smooth decline in earlier technologies (Rosen 1997). Rather, the old technology is confined to certain niches where it is particularly suited. These niches may be determined by economic, religious, environmental or other factors but generally result in reduction in the range of the old technology.

The hypothesis of declining typological range equating with flint decline may seem commonsensical but there are possible arguments against expecting such an equation, and indeed for Lerna it is not evident. Less specialisation and more mass production with a multitude of small workshops or domestic production (as suggested by Rosen 1996, 149) may result in a greater range of tools. However, one might expect the differences between each workshop or domestic production site to be superficial as the tendency to produce unique forms is countered by need to fulfil a function and by consumer expectations of a standard product.

Defining a typological group is not simple and archaeological literature on the pitfalls is extensive (Beck and Jones 1989; Clark 1978, 205–209; Whallon and Brown 1982 and others). The essence of the problems is twofold:

- The way in which different types are defined affects their range, some typologies may be functional others stylistic, etc. and function can usually only be deduced by microwear (**glossary**) analysis and contextual data. There is neither in British museum artefacts.
- Radically different techniques can produce similar outward technique. Under ideal circumstances this would be elucidated through exploring the chaîne opératoire. Again, this is not an option with material I have available.

More detailed discussion of typological construction is included in **Appendix 1**.

Because of the problems, my typology (**Appendix 1**) is that of final form and does not seek to differentiate between functional or non-functional traits. Specificities of the correlates are not important for the analysis so that functional or utilitarian traits are conflated with supposed 'non-functional' traits. There is little value in trying to distinguish between the two and in fact it could be impossible as most artefacts have both stylistic and functional traits.

However, perhaps what is important is whether traits are intentional or non-intentional. Traits resulting from individual idiosyncrasy or accident may increase when a skill is not formally taught in large groups i.e. in situations which are perhaps more reminiscent of a declining medium or of domestic industries. While not all intentional traits are recognised, we can select traits which are recognisable over a wide geographic area and traits which are distinctive enough to have been recognised by the particular culture group.

Interestingly, variety of types is not only a measure of flint use but is also related to the ability of flint to carry a social message (Roe 1995, 44). It is pertinent for this thesis that variety of type might be equated to metaphoric importance.

3.2.5 GROWTH IN EXPEDIENT TECHNOLOGY

One might expect that, as flint was ousted by metal, 'expedient' (*ad hoc*) flint tools increased (suggested for Iron Age Britain by Humphrey 2004, 247–248; see also Högberg 2004, 234–235 for the European Bronze Age; Rosen 1996, 143–144, 149 for the Bronze Age Levant).

However, expedient or *ad hoc* tools (largely unretouched pieces, and flakes rather than blades) may actually be extremely important. Expedient tools are produced in societies where flint use is embedded and common. These include: the Dani of the Irian Jaya province of Indonesia (Hampton 1999, 297); the Maya (Johnson 1996, 161–162); Australian aboriginals (Hayden 1977, 179; Middle Palaeolithic groups (Binford 1966, 263, 264; cited by Hayden 1977, 179); people of Papua New Guinea (Stillitoe and Hardy 2003); 19th century Tasmanian aboriginals (Mitchell (1955 and McGrew 1987).

Growth in expedient tools may not simply mark flint decline but may indicate a change in the mental attitude toward flint, a change in ideology. The increase in *ad hoc* tools suggests less importance was laid upon the visual form of the tool. In a society where visual icons are important this could mean that the tool was not held in such high regard. As Högberg (2004, 236) states of the expedient technology of Late Bronze Age Scandinavia 'it can be stated that the mental approach to flint knapping and the use of flint tools within the Late Bronze Age daily domestic household activity sphere, is characterized by perception of function rather than form'. In Egypt, it seems visual form was important and so we may assume that growth in expediency indeed correlated with decline of flint.

A standard form makes obvious a tool's identity, both functionally and ideologically, it eases its ability to signify. Non-standard forms diffuse the message. The non-standard flint knife is not explicitly linked with the idea of the iconic knife. For something to be deliberately made to express an idea it must be iconic not expedient. The problems of the flint knife as explicit style, and also the existence of the flint knife without the physical iconic referent, are discussed in more detail in later chapters.

3.2.6 MICRO-WEAR ANALYSIS

Finally, Stocks (1988) has compared wear-analysis on ancient Egyptian artefacts and replicated results using both stone and metal tools. Similarly, Devaux (2000) has examined manufacture marks on ancient stone statuary to address the issue of whether stone or metal tools were employed. This is not a method I have used, for pragmatic reasons, nevertheless the work of Stocks and Devaux is pertinent in measuring the decline of flint. It shows that flint continued to be used to work hard stone until at least the 25th Dynasty, though does not compare use in different periods.

3.2.7 METHODOLOGY CONCLUSIONS

Individual means of measuring flint decline are imperfect but combining them increases reliability. A discussion of the methodology makes clear that measuring decline is far from understanding mechanisms for decline. It may be possible to identify decrease in typological range, quantitative data, skill levels with an increase in *ad hoc* tools, but this by no means explains flint decline. However, explanation of decline is beyond the purpose of this thesis. I now turn to the results of my analysis on measuring the decline of flint.

3.3 DECLINE RESULTS

3.3.1 INITIAL OBSERVATIONS BASED ON FAMILIARITY WITH THE MATERIAL

Without metrical data, or a systematic examination of attributes discussed above, but with the benefit of having studied collections from different periods in British museums and looked at published material over a period of over ten years, I would give the following assessment of flint in Bronze Age Egypt[18]:

a) There are high numbers of flint artefacts until the end of the Middle Kingdom
b) The New Kingdom shows a considerable decrease in lithic material
c) Sometime during the New Kingdom there is an even more dramatic fall-off in numbers of flint artefacts
d) Those items exhibiting most skill (particularly bifacial knives) tend to occur in the Early Dynastic. However, a small percentage of highly skilled, specialised work continues until at least the early New Kingdom
e) From the Middle Kingdom onward blades get shorter and thicker
f) The Early New Kingdom shows an increase in flake technology and blades are significantly shorter and thicker
g) Although the New Kingdom still produces one or two fine pieces, the general nature of the material suggests an increase in expedient technology.

By this analysis, there was a general decline in skill from the Early Dynastic but there are sudden downward trends toward the end of the Old Kingdom, at the beginning of the New Kingdom, and sometime again during the New Kingdom, probably during the 19th–20th Dynasty. After this period flint was very much

[18] The following assessment was made before studying the metrical data.

superseded by metal, though sickle blades and some other tools persisted in smaller numbers.

3.3.2 MEASURING TOOL QUIANTITIES

Numbers of flints in British museums may be given as follows:

Period (number of years in that period)	Numbers of flint artefacts
Earl Dynastic (414)	362
Old Kingdom (505)	371
Middle Kingdom (405)	459
New Kingdom (481)	137
Third Intermediate Period (322)	0
Late Period (737)	6
Table 1: Numbers of flints in British museums	

While, as already stated, this is the least satisfactory method of measuring flint decline, the fall off from Middle to New Kingdom and then again in the Post New Kingdom is startling.

3.3.3 DECLINE IN TYPOLOGICAL RANGE

Debono (1982, 381) states that by the New Kingdom the range of tool types had decreased, though specifics are not described. **Table 2** is an assessment of the decline in range for Dynastic Egypt (it also acts as an abbreviated typology). Both published material and material from British museums is included. The steep-ended scraper was only indentified from my first hand analysis of flint from Amarna (**maps 3 and 5**) and it is possible that this slightly skews the data as arguably only a close analysis revealed the type. Types were chosen on the basis of the typology in **Appendix 1**. Sub-types, for example, the various types of bifacial knife are not given because it was felt that the sub-types probably fulfilled a very similar function. The existence of types is deduced only through evidence of having seen them published or in ‘the flesh’. So, for example, chisels must have been used until the Late Period for working hard stone. However, their existence in this table is only been recognised for the Middle Kingdom.

	Early Dynastic	3rd-4th Dynasty	Late Old Kingdom	Middle Kingdom	New Kingdom	Third Intermediate Period	Saite Period
Sickle Blades	yes	yes	yes	yes	yes	yes	yes
Flake awls?	no	no	no	yes	yes	no	yes
Transverse arrowheads	yes	yes	no	yes	yes	no	yes
Bifacial knife	yes	yes	yes	yes	yes	yes	no
Core tools	no	yes	yes	yes	yes	no	no
Burnishers	no	no	no	no	no	no	yes
Funerary Palettes	no	yes	yes	no	yes	no	no
Large bifacial projectile points	no	no	no	yes	yes	no	no
Bifacial arrowheads	yes	no	no	no	yes	no	yes
Adze/hoe	yes	yes	yes	yes	yes	no	no
Pick	yes	yes	yes	no	yes	no	no
Drill bit	yes	yes	yes	yes	yes	no	no
Borer	no	no	yes	yes	yes	no	no
Chisel	no	no	no	yes	no	no	no
Microdrill	yes	yes	yes	yes	no	no	no
Pesesh kef	yes	yes	yes	no	no	no	no
Round and sub round scrapers	yes	yes	no	no	no	no	no
Triangular scrapers	yes	yes	yes	yes	no	no	no
Axes, not polished	yes	yes	yes	yes	no	no	no
Tabular scrapers	no	no	yes	no	no	no	no
Bracelets	yes	yes	yes	no	no	no	no
Pointed blades	yes	yes	yes	no	no	no	no
'Razor' blades	yes	yes	yes	no	no	no	no
Intermediate bitruncated	yes	yes	no	no	no	no	no
Segmented blades	no	yes	yes	no	no	no	no
Polished axe	no	yes	no	no	no	no	no
Flint animals	yes	no	no	no	no	no	no
Steep-ended scraper	no	no	no	no	yes	no	no
Number of types present	17	18	17	13	12	2	5

Table 2: Numbers of artefact types by period for all sites (published material and material from British museums)

While it is likely that there are errors in the above table, for example, some artefact types in museums are not datable and may possibly be present for a longer chronological time span than others, a pattern of decrease in range of tool types is evident. This is particularly marked between the late Old Kingdom and the Middle

Kingdom and between the New Kingdom and the Third Intermediate Period. It is possible that the latter decline is overstated in that the reluctance on the part of researchers to accept lithic tools on Egyptian sites as coming from later periods may have resulted in lack of recording of later finds.

3.3.4 DECLINE IN SKILL

In the following sections I first deal with the database of material from museum collections and then, where relevant, explore other information.

3.3.4.1 BLADES v. NON-BLADES

The numbers of blades in the overall lithic population is given for each period in **table 3**, and compared with other broad tool groups.

	Early Dynastic	**Old Kingdom**	**Middle Kingdom**	**New Kingdom**
Total tool numbers	375	447	435	128
Blades	196 (52.26%)	330 (73.82%)	221 (50.8%)	61 (47.66%)
Bifaces	100 (26.7%)	58 (13%)	157 (36.09%)	8 (6.25%)
Crescentic drills	0	20 (4.47%)	22 (5.06%)	1 (0.8%)
Cores	4 (1.06%))	2 (0.447%)	7 (1.6%)	1 (0.8%)
Microdrills		21 (4.7%)	0	0
Retouched flakes	27 (7.2%)	4 (0.89%)	4 (0.91%)	7 (5.5%)
Unretouched flakes	9 (2.4%)	3 (0.672%)	12 (2.75%)	26 (20.3%)
Polished tools	4 (1.06%)	3 (0.672%)	0	11 (8.6%) this includes 5 amuletic knives in Cairo Museum

Table 3: Tool types in overall populations by period (Based on material from British museums). Numbers of tools are given first followed by their percentage in the overall population for that period.

In the absence of a complete flake/blade or debitage thereof, it is often difficult to tell if scrapers were made on wide blades or flakes. In **table 3** scrapers were assumed to have been made on flakes rather than on blades because it is easier to make flakes than broad blades. Similarly, the table assumes that all New Kingdom sickle 'blades' were actually made on blades, whereas some were made on flakes. It is difficult to calculate actual numbers but it is thus likely that the New Kingdom blade population shown in the table should be lower. Most of the material from Panhesy's House at Amarna (**maps 3 and 5**) consisted of flakes and the find's cards from New Kingdom and later Memphis were largely flakes.

The results show an increase in percentage of unretouched flakes from the Middle to New Kingdom which may be interpreted as an increase in expedient technology. At the same time there is a sudden drop in bifaces. Percentages of blades remain relatively unchanged.

3.3.4.2 BLADE LENGTH, WIDTH AND THICKNESS

There are several ways in which one might measure decline in blade length and corresponding increase in thickness and width. One could only examine unretouched, complete blades. An assemblage of distal (**glossary**) blades fragments, for example, is likely to produce thinner and narrower measurements than an assemblage of largely medial fragments, and of course only complete blades can show length. Retouch may result in artificial narrowing of blades. Additionally, one might argue that within one period, results are likely to vary from site to site, depending on raw material available, etc. Thus below, I compare different sources of blades, retouched, unretouched, published and unpublished. In some cases comparisons are made across site and sometimes for individual sites. The results tend toward the same conclusion.

Firstly, I consider unretouched blades from published and unpublished sources. For British museum material the measurements were taken at the medial point along the blade. I do not know which parts of the blades were measured from published sites.

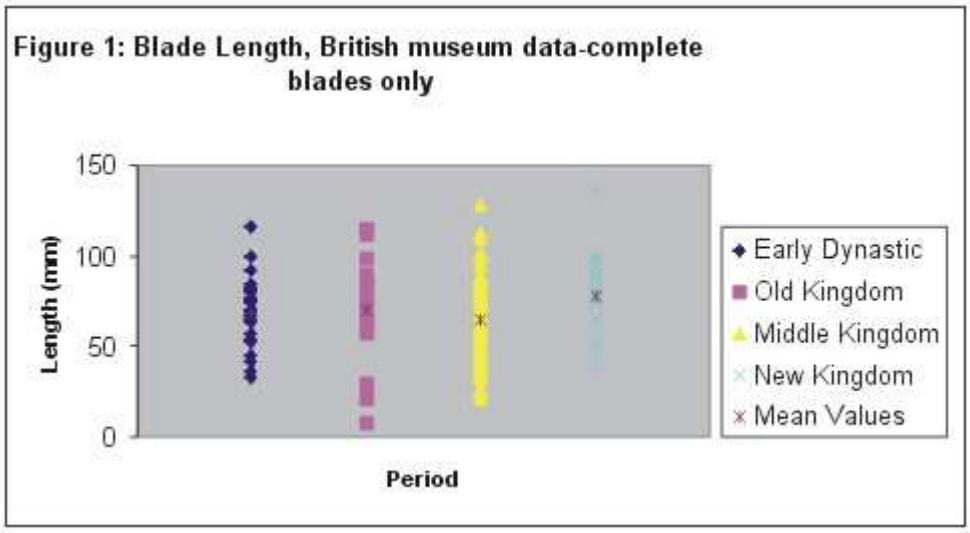
Site (period)	No. of blades	Mean length (mm)	Mean width (mm)	Mean thickness (mm)	Data source
Hemaka 1st Dynasty	69	93.76±21.02	18.5±4.41	----------	Emery (1938)
Abydos 1st Dynasty	20	71.1±16.86	15.5±4.63	5.5±0.97	Spencer (1980)
Saqqara 1st Dynasty	14	76.5±17.94	18±6.51	----------	Spencer (1980)
Abydos, Early Dynastic	14	79.02±10.68	14.99±2.89	4.72±1.61	British museums
Qau Early Dynastic	16		14.98±4.85	4.73±2.07	British museums
Buhen Old Kingdom	288 (47 complete)	48.77±19.65 (74.39±10.12mm)	11.26±2.37mm (13.25±2mm)	3.45+1.14mm (4.23±1.14mm)	British museums
Tell el-Dab'a Middle Kingdom	19	68.31±16.60	16.85 ± 3.51	4.73±1.30	Tillmann (1992)
Harageh Middle Kingdom	98 (13 complete)	58.58±15.75mm (81.54±7.31)	14.08±86mm (14.14±1.85mm)	4.19±1.1mm (4.7+0.88mm)	British museums
Tell el-Dab'a 2IP	40	60.40±7.48	17.62±5.43	5.21±1.84	Tillmann (2004)
Qantir New Kingdom	90 (35 complete)	65.32 ± 17.66	19.03 ± 7.35	7.02±3.08	Tillmann (1992)
Gurob New Kingdom	9	67.4±11.84mm	13.77±2.96mm	3.9±0.0mm	British museums
Amarna New Kingdom	14 (9 complete)		19.66±4.43mm	7.24±1.75mm	British museums

Table 4: Unretouched blade measurements

Generally, there is a decline in length and increase in width and thickness. The Early Dynastic blades from the tomb of Hemaka and 1st Dynasty Saqqara (**map 4**) seem unusually wide compared to others of the period. The Gurob (**maps 3, 4 and 5**) blades appear particularly narrow but only nine blades were measured.

Of course, the results include both complete and incomplete blades, thus one might not be comparing like with like. For example, for one period we may be measuring complete blades and for another incomplete blades. I now therefore consider alternative means of measuring, such as measuring complete blades only, partly as a check against the above results. Published results which cannot be included in the above table are also considered separately.

Blade length - British museum data, complete blades.



		Early Dynastic	Old Kingdom	Middle Kingdom	New Kingdom
Blade length in mm	**1-19**				
	20-29		2 (10.5%)	3 (4.11%)	
	30-39	2 (7.7%)	1 (5.26%)	12 (16.4%)	1 (5.5%)
	40-49	2 (7.7%)		7 (9.6%)	2 (11.11%)
	50-59	5 (19.2%)	2 (10.5%)	8 (11%)	2 (11.11%)
	60-69	5 (19.2%)	3 (15.8%)	11 (15%)	2 (11.11%)
	70-79	6 (23.08%)	2 (10.5%)	14 (19.2%)	1 (5.5%)
	80-89	3 (11.54%)	5 (26.3%)	11 (15%)	5 (27.78%)
	90-99	2 (7.7%)	1 (5.26%)	2 (2.7%)	5 (27.78%)
	100-109			3 (4.11%)	
	110-119	1 (3.8%)	3 (15.8%)	1 (1.37%)	
	120+			1 (1.37%)	1(5.5%)
	Total numbers	26	19	73	19

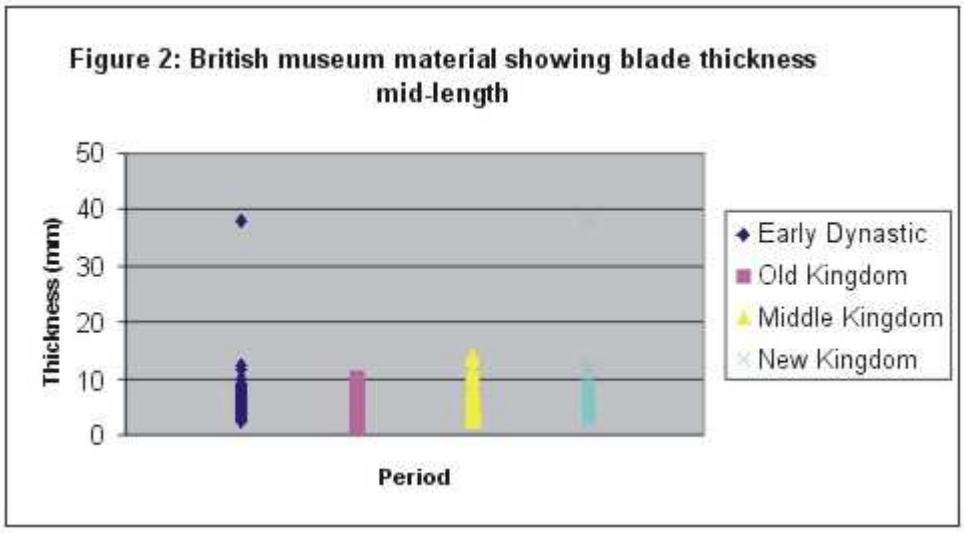
Table 5: Length of British museum blades – complete blades only

There were also three Second Intermediate Period blades which were not included because of the small sample.

There seems to be no strong discernible pattern in blade length. While the scatter charts show a few outliers, they are not of such a number to make a considerable difference to the results. Here, and elsewhere in the thesis, scatter charts are included to show outliers in relation to mean values. The New Kingdom has perhaps the most conspicuous outlier. If that is removed, the mean value comes to 74.72. This still leaves no discernable pattern in blade length.

Blade thickness - British museum data

All blades were included in the sample whether complete or incomplete. There were only 6 blades in all dating to the Second Intermediate Period.



		Early Dynastic	Old Kingdom	Middle Kingdom-2nd IP	New Kingdom
THICKNESS IN MM	1-1.9		20 (6.6%)	1 (0.56%)	
	2-2.9	23 (14.3%)	89 (29.4%)	24 (13.6%)	3 (6.67%)
	3-3.9	42 (26.1%)	88 (29%)	45 (25%)	3 (6.67%)
	4-4.9	34 (21.1%)	60 (19.8%)	45 (25%)	12 (26.7%)
	5-5.9	27 (16.8%)	27 (8.91%)	27 (15.26%)	7 (15.6%)
	6-6.9	15 (9.32%)	6 (1.98%)	13 (7.34%)	5 (11%)
	7-7.9	6 (3.72%)	6 (1.98%)	11 (6.2%)	6 (13%)
	8-8.9	4 (2.48%)	3 (0.1%)	1 (0.56%)	3 (6.67%)
	9-9.9	4 (2.48%)	2 (0.07%)	2 (1.13%)	1 (2.2%)
	10-10.9	2 (1.24%)	2 (0.07%)	1 (0.56%)	2 (4.4%)
	11-11.9			2 (1.13%)	1 (2.2%)
	12-12.9				1 (2.2%)
	13-13.9			4 (2.26%)	
	14+	4 (2.48%)		1 (0.56%)	1 (2.2%)
	Total	161	303	173	45

Table 6: British museum material showing blade thickness mid-length

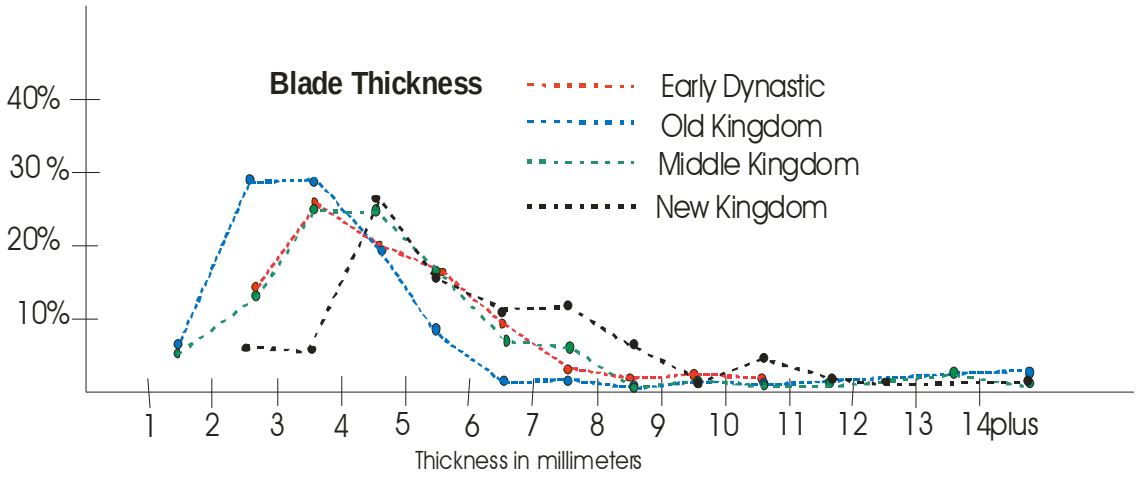


Figure 3. Mean thickness of British museum blades.

The post New Kingdom material was not added to the table or charts because of the low numbers therein. With the exception of the Early Dynastic material, the peaks for the thickness increase with time (best shown in figure 1) and the lowest value thicknesses also increase (best shown in figure 2). This suggests that there is some evidence for increased thickness of the blade. This was confirmed by a calculation of the mean values.

The scatter chart shows an outlier for the early Dynastic, removing this would make blades slightly thinner for the Early Dynastic.

Analysis of mean mid-blade thickness gives following results:

Early Dynastic	5.05mm
Old Kingdom	3.55mm
Middle Kingdom	4.87mm
New Kingdom	6.77mm

The equation of blade width was then added, as it was possible that broad but thin blades were obscuring the results. Such blades are particularly apparent in the Old Kingdom (**Appendix 1.7; plates 8, 17-18**). This was done for complete blades by

dividing mean length by width, and then the result was divided by thickness[19]. The final result was as follows:

Early Dynastic	1.139
Old Kingdom	1.431
Middle Kingdom	1.219
New Kingdom	0.774

This confirms that from the Old to New Kingdom blades get wider and, relative to their length, thicker (the higher the number the longer and thinner the blade). Again, the Early Dynastic is anomalous, probably because of the diversity of tool types (**3.3.3**).

Retouched blades, published material

Tillmann (1992, 184–185, fig. 125) states that blade thickness and width increases from Old to New Kingdom while blade length decreases. He gives the results as follows, presumably from material from Qantir and Tell el-Dabʿa [20] (**maps 3 and 4**).

	Old Kingdom	**Middle Kingdom**	**Second Intermediate Period**	**New Kingdom**
Length	91.05±16.33	68.31±16.6	60.40±7.48	65.32±17.66
Breadth	17.83±2.93	16.85±3.51	17.62±5.43	19.03±7.35
Thickness	----------	4.73±1.3	5.21±1.84	7.02±3.08
RTI	----------	14.18±3.91	17.65±3.67	20.33±6.57

Table 7: Blades thickness and width (Tillmann 1992, 184)

RTI = Relative thickness index

The RTI (or RDI ‘relativen Dicken-index’) was first used by Albert (1985, 110), and is expressed as:

$$RDI = \frac{100 \cdot D}{0.5 \cdot (L+B)}$$

D (der Dicke) = thickness, L = length (die Länge) and B = width (die Breite).

[19] This equation was first tested on a number of obviously shot and thick or long and thin blades before being applied to the database material here.

[20] The results are given direct from his table of calculations, not my own.

If we look at the published material from el-Ashmunein (which does not use the RDI method) dating to the Third Intermediate Period (Spencer 1993) we get the following results:

Number of blades	23
Mean Width	17.26
Standard Deviation	6.93
Coefficient of Variation	40.18

Although we cannot tell from where measurements were taken, the width is consistent with Tillmann's observations.

The largely New Kingdom Memphis material is published in Giddy (1999, 225–243, pls. 49, 52, 90) as a list of each retouched item and a few illustrations. It is not clear if the thickness is the mean thickness of the whole blade, or the thickness at a medial point of the blade. The thicknesses of blades (including sickle blades which arguably may include flakes, was as follows):

Pre New Kingdom Level	mean 4.3mm (out of 54 measured blades)
Early-Mid 18th Dynasty Level	mean 5.5mm (out of 50 measured blades)
Mid-late 18th Dynasty Level	mean 7.8mm (out of 18 measured blades)
Ramesside Level	mean 6.9 (35 blades were measured)
Third Intermediate Period Level 1	mean 5mm (only three blades with thickness given).

The mean New Kingdom (18th Dynasty to Ramesside) thickness for this Memphis material was 6.58mm, which, as was shown above is close to the mean thickness of New Kingdom blades from British museums, though further from Tillmann's findings. The Memphis material also shows a jump in blade thickness from Pre-New Kingdom to New Kingdom.

Sickle Blades

In **Appendix 1, 7.4.9**, I present several tables showing the changing shape and size of sickle blades. It is very clear that sickles get larger and thicker through time. Here I repeat only the final table:

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Abydos **Early Dynastic**	53	43.24±10.81mm	12.31±1.99mm	3.82±0.85mm	British museums
Buto **OK**	16	45.3±9.87mm	13.28±1.44mm	4.14±1.13mm	Tillmann 1992 (1)
'Ayn-Asīl **Late OK-1st IP**	tabular 87-straight -------- 43-end sickles	48mm-straight ---------- 61mm-end sickles	24mm-straight ---------- 25mm-end sickles	5mm-straight ---------- 6mm-end sickles	Midant-Reynes 1998 (2)
'Ayn-Asīl **Late OK-1st IP**	75 on brown-black flint	47mm	12mm	4mm	Midant-Reynes 1998 (2)
'Ayn-Asīl **Late OK-1st IP**	20 made on pink flint	39mm	13mm	3mm	Midant-Reynes 1998 (2)
el-Ashmunein **1IP**	21	54.71±16.85mm	17.19±7.25mm	----------	Spencer 1993
Tell el-Dab'a **MK**	19	40.73±12.96mm	18±3.85mm	4.64±1.15mm	Tillmann 1992 (1)
Various **MK**	38	57.10±13.48mm	14.31±3.49mm	4.06±1.41mm	British museums
Qantir **Type B-NK**	17	43.67±6.8mm	25.11±5.79mm	7.33±2.42mm	Tillmann 1992 (1)
Qantir **Type A-NK**	59	46.45±12.44mm	22.63±5.82mm	7.03±6.70mm	Tillmann 1992 (1)
Memphis **NK-TIP**	29	47.55±15.87mm	26.43±7.44mm	5.5±2.1mm	Giddy 1999
Amarna **18th Dynasty**	23	60.97±19.52mm	26.43±7.44mm	7.39±3.13mm	British museums
el-Ashmunein **3IP**	9	46.33±14.52mm	20.11±5.34mm	---------	Spencer 1993

Table 8: Sickle blades, all periods

Conclusions blade length, thickness and width

It is clear from all the above results that, after the Early Dynastic, blades generally get thicker, wider and shorter.

3.3.4.3 PRESSURE FLAKING

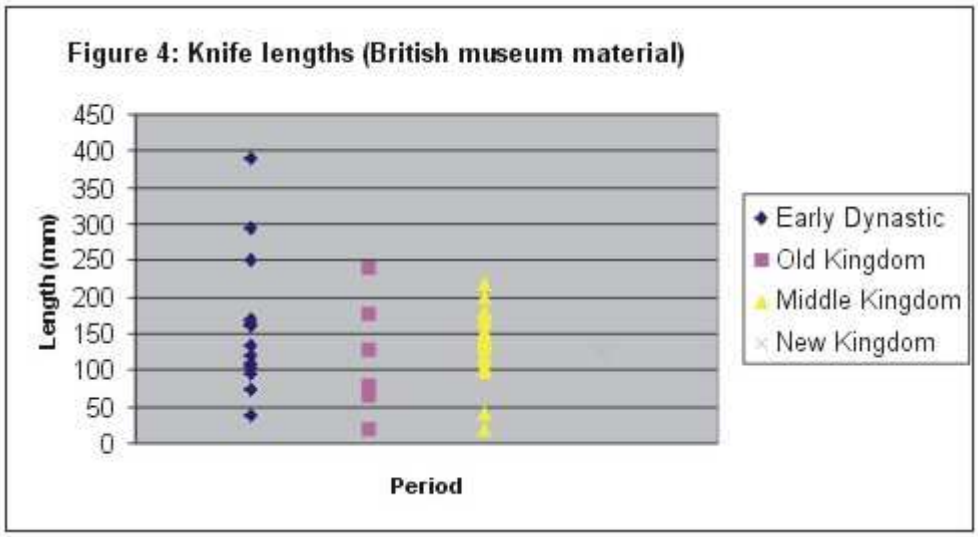
As stated above, pressure flaking is hard to define with certainty, thus I have not recorded it for individual tools. Midant-Reynes (1983, 262) questions whether or not the Old Kingdom to Second Intermediate site of ʿAyn-Asīl (**map 3**) displays the last of the pressure flaked tools. However, while not recording it for individual blades, an examination of British museum material shows that the majority of blades from Middle Kingdom Lahun (**maps 4 and 5**) do appear to be pressure flaked. New Kingdom blades by comparison are rarely pressure flaked.

3.3.4.4 BIFACE MEASUREMENTS

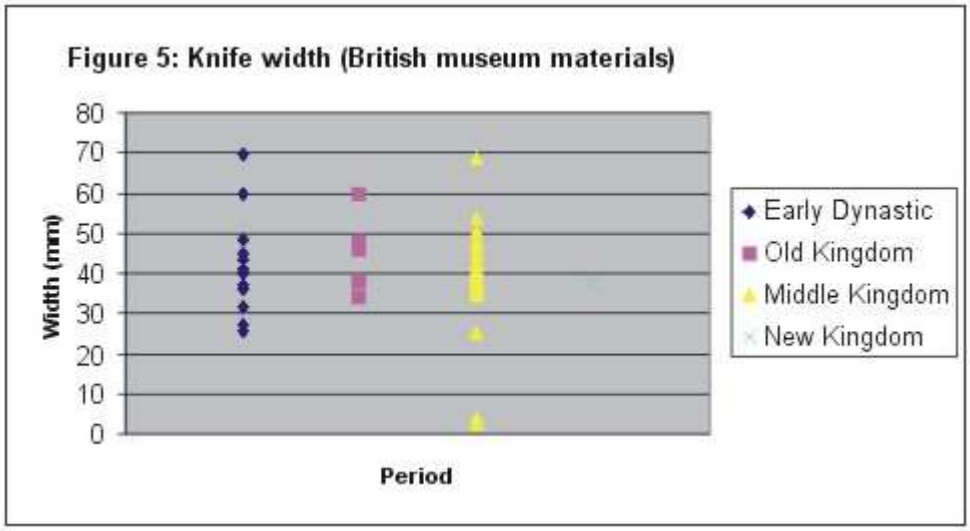
It was decided to consider knives from British museums, rather than bifaces generally, because:

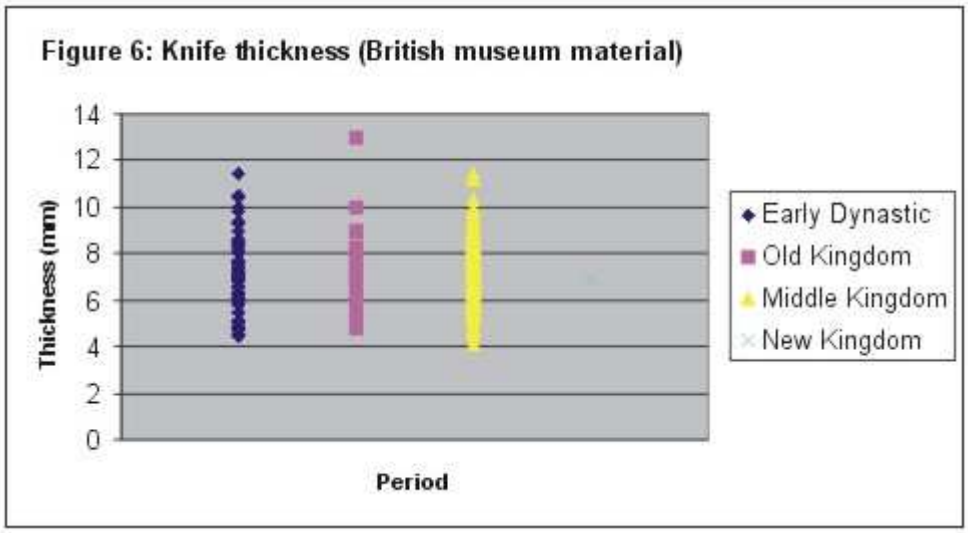
- These were apparent in British museums covering a wide time range and in reasonable quantities
- As I had measured them myself I was confident that measurements were comparable

Only the length and width of complete knives was considered but thickness was considered for all.



As explained in **Chapter 4**, the Early Dynastic type-4 knives are particularly long. This would explain the outliers in figure 4.





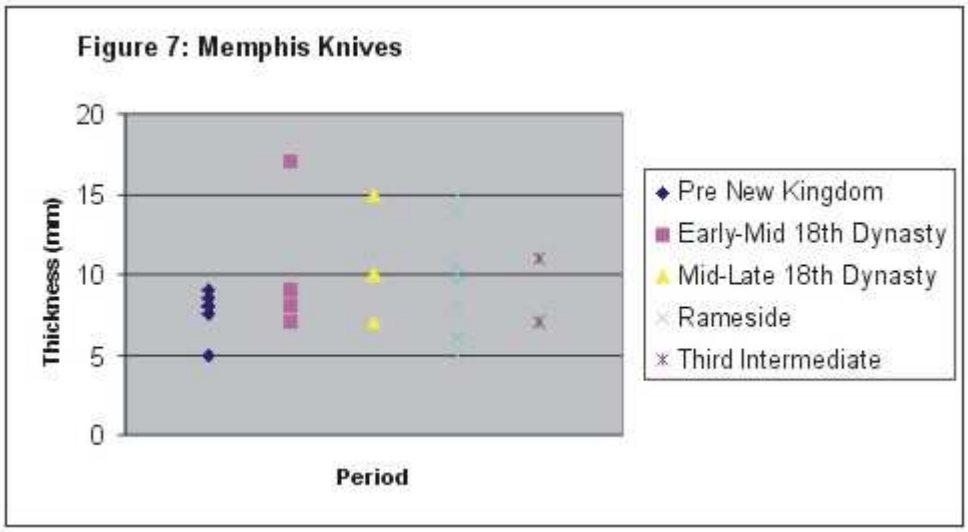
This can be summarised in the following table:

Period	Number of knives	Mean length (mm)	Mean width (mm)	Mean thickness (mm)
Early Dynastic	68 (14 complete)	162.11	40.72	7.13
Old Kingdom	20 (6 complete)	117.8	44.03	7.47
Middle Kingdom	128 (25 complete)	140.076	37.24	7.21
New Kingdom	1 (1 complete)	126	37.3	6.9

Table 9: Knife measurements (material from British museums)

The results show little variation in width and thickness, though the length of Early Dynastic knives is considerably greater than for other periods.

There were 33 knives published from Memphis (Giddy 1999), of which 28 were dateable. Mean length and width was not calculated as it was unclear how these were measured. However, thickness was considered and the results were as follows:



Mean values are as follows:

Period	Number of Knives	Mean thickness (mm)
Third Intermediate Period	2	9
Ramesside	10	9
Mid-Late 18th Dynasty	4	10.5
Early-Mid 18th Dynasty	5	10
Pre New Kingdom	7	7.71
All dated knives	28	9.07
Table 10: Memphis knives (Giddy 1999)		

Memphis New Kingdom (18th Dynasty and Ramesside) knives appear thick compared to some others, albeit a small sample. If one considers the scatter chart in figure 6, there are few less than 7mm thick. The one example from a British museum (Pitt Rivers 1896.53.2.1-2) measured 6.9mm and two from Karnak (**map 7**) measured 8mm and 7mm (Miller 1985).

3.3.4.5 SYMMETRY AND REGULARITY

In practice, 'measuring' blade symmetry and regularity proved an even more difficult task than originally envisaged. The difficulty was objectivity. Despite working with photographs of all the near complete blades, I was aware of being swayed by the

'beauty' of particular shaped blades or by more complete examples. In the end I only categorised blades of extreme regularity (given the number 1) or extreme irregularity (given the number 3). See **plates 6 and 7** for examples.

Period	Regular (blade numbers)	Extremely irregular (blade numbers)
Early Dynastic	21	11
Old Kingdom	19	2
Middle Kingdom	11	5
2nd Intermediate Period		4
New Kingdom	1	14
Undated	1	7
Total number of blades	53	43
Table 11: Regular and irregular blades		

While asymmetric irregular blades and regular symmetrical blades were found throughout the Dynastic period, it was particularly noticeable that irregular blades were salient in the Second Intermediate Period and New Kingdom. This is striking since there are, in any case, few blades of these later periods.

3.3.4.6 MISTAKES

Hinge fractures or overshot flakes/blades were taken as evidence for mistakes. The results were as follows:

Period	Number of mistakes (percentage of the total lithic population for the period in question)
Early Dynastic	3 (0.8%)
Old Kingdom	12 (2.6%)
Middle Kingdom	11 (2.52%)
Second Intermediate Period	1 (9.9)*
New Kingdom	6 (4.68%)
Late Period	1 (14%)*
Table 12: Mistakes in British museum material	

There were only 11 tools altogether in the Second Intermediate Period and only 7 in the Late Period.

3.3.4.7 SPECIALISATION

Specialisation is clearly attested for early periods. The skill employed in the manufacture of some Early Dynastic tools, such as fine bifacial knives, and jewellery,

such as bracelets, is simply beyond the ability of any but very practised individuals, and thus one would believe it to be the work of full-time specialists.

Above it was stated that restricted access to raw materials and workshops were among the criteria for deducing specialisation. For Egypt evidence for restricted access is discussed in this thesis, **4.4** and **5.2.3**. Few workshops are identifiable, though, as discussed briefly in **Appendix 1.2**, they are evident from the Early Dynastic up until the Ramesside Period. The fact that workshops for knives, etc. are found attached to temples suggests that the temples possibly controlled knife production (**5.2.3**).

Standardisation may also suggest workshops as well as skill. Ramesside Qantir (**maps 3 and 4**) not only had concentrations of flint, but also numbers of arrowheads all weighing exactly 1.5g (Herold 1998, 136–137).

Hikade's work (2002) on Old Kingdom Elephantine (**map 8**) showed that specialists were employed for different kinds of tool manufacture. Blades, the most common tool on the site, seem to have been manufactured close to the site in specialist workshops. Flake scrapers and borers, however, seem to have been made on the spot. Bifacial knives were imported from outside the area.

In addition, concentrations of tools within restricted areas may indicate specialisation, such as the evidence for bead manufacture evidenced by the large quantity of micro-drill bits at Middle Kingdom Abu Ghalib (**map 4**; Larsen 1935, 80, fig. 19). The caches of tools in New Kingdom Memphis (e.g. RAT 127 and RAT 159, Giddy 1999, 228 12.4) may also suggest specialisation. The caches contained a high number of blanks, suggesting a redistribution centre for partially made tools. No notable concentrations of debitage were found in the excavated area, which suggests either that finishing was carried out in an as yet undiscovered centre or on an *ad hoc* basis. The skill employed in the manufacture of these tools is perhaps not so obvious as the finely made ripple knives and incredible flint bangles of earlier times, but this does not imply lack of specialisation. Here one may postulate part-time specialists. The absence of specific flint manufacturers in the Middle Kingdom *Satire of the Trades*, further suggests this. Here, the arrow-maker goes out to the desert, conceivably to collect flint (Seibert 1967, 168). As he is an arrow-maker, it is likely that he also makes the shafts rather than being a pure knapper. The cores found in the Workmen's Village at New Kingdom Amarna (**maps 3 and 5**) represented a variety of knapping strategies suggesting 'competent but unspecialized knappers' (Miller 1987b, 147).

Fine bifaces are rare after the Old Kingdom, except perhaps on military sites. The most well known site with large numbers of fine bifacial tools is that of Mirgissa

(**maps 2 and 9**; Vila 1970; **plates 52-53**), which must surely represent specialised craftsmanship. Vila considered the flint excavated at Mirgissa to be of early New Kingdom date. The excavation archive does not allow a new reassessment of the dating of the site (Gratien pers. comm.) thus we must assume Vila to be correct. Besides, the site could not be earlier than the late Middle Kingdom, thus the material is considerably later than other fine bifacial material from Egypt. The site is that of an Egyptian fort in Nubia, and while it could be suggested that the material is thus not Egyptian but Nubian, see **5.3.1** for the argument disputing this.

James Harrell's work has shown that as late as the Ramesside Period the Egyptians appear to have engaged in mass production of regular blades at the quarry site of Wadi Umm Nikhaybar (**map 1**; James Harrell pers. comm.). This must surely be the work of specialised craftsmen.

Large quantities of sickle blades were found on the palace rubbish tips at Amarna (**maps 3 and 5**; Spurrell 1894, 37). This is conceivably a knapping area though is more likely to be a rehafting area or even a dump (several blades showed evidence of use). Outside Egypt, sickle blades are usually considered to be made by independent specialists rather than attached specialists working for the elite, for example in Bronze Age Greece (Hartenberger and Runnels 2001, 279). However, the fact that these are in Amarna might suggest attached specialists. This is especially likely as agricultural land was on the opposite side of the river to Amarna and one might expect and independent specialist to have their workshop near the use of the artefact.

Lack of debitage on domestic sites may well indicate that flints were manufactured at specially selected centres. Again this seems to be the case (Schmidt 1992, 80 for Tell Ibrahim Awad (**map 4**); Vachala and Svoboda 1989, 179 for Abusir (**map 4**); Giddy 1999 for Memphis (**maps 3 and 4**)). Domestic production seems to have been restricted to resharpening and reworking of broken artefacts. Thus, there seems to be clear evidence of specialisation for flint tool manufacture within Dynastic Egypt. Domestic production appears to creep in during the New Kingdom (as shown by Miller's work in the Workmen's Village at Amarna, Miller 1987b). There is nevertheless still evidence for specialisation at this period too.

3.3.5 GROWTH IN EXPEDIENT TECHNOLOGY

This was partly considered above in numbers of different tool types. It was shown in **table 2** that, for data from British museums, numbers of blades decreased from the

Middle to New Kingdom and numbers of flakes particularly unretouched flakes, increased. This is consistent with a growth in expedient technology.

At Memphis (**maps 3 and 4**; Giddy, 1999 plus drawings seen by me 2001) shows the following tools, were present:

	3IP	Ramesside	Mid-Late 18th Dynasty	Early-Mid 18th Dynasty	Pre New Kingdom
Scrapers and flakes	3 (25%)	33 (41.8%)	40 (62.5%)	25 (29.41%)	14 (18.42%)
Blades	3 (25%)	35 (44.3%)	18 (28.12%)	50 (58.82%)	54 (71.05%)
Bifaces	5 (41.7%)	10 (12.66%)	5 (7.8%)	7 (8.23%)	7 (9.21%)
Awl	1 (8.3%)	1 (1.27%)	1 (1.6%)	3 (3.53%)	1 (1.31%)
Total tool numbers	12	79	64	85	76
Table 13 : Tool types - Memphis (Giddy 1999)					

Sickle blades were included in the general blade count. Scrapers and flakes are all classed together because at Memphis scrapers are generally crude (Giddy 1999, 227–228) and seem, from my study of drawings, to be made on flakes. Bifaces included knives and projectile points. Fragments were considered as one unit. There is no discernable pattern here.

Most of the items from Panhesy's House at Amarna (**maps 3 and 5**) likewise appeared to be expediently produced flakes (Graves-Brown 2009).

3.4 CONCLUSIONS

The Early Dynastic appears to throw up a few anomalies. For example, a number of blades are particularly wide, going against the general trend of blades increasing in width and thickness through time. This may be because the larger typological range of the Early Dynastic accommodates wide and large blades.

Generally however, the results support my conclusions formed before analysing the results (**3.3.1**). There appear two particular changes of rate, or dips, in flint decline. One occurs between the Middle and New Kingdom and another in the New Kingdom to Third Intermediate Period. However, even in the New Kingdom there is evidence for specialisation and some highly crafted lithic pieces. The more dramatic change occurs at the end of the New Kingdom. Possible reasons for the decline of flint at these junctures are outlined in **Chapter 7**.

4. ARCHAEOLOGICAL EVIDENCE: THE PHYSICALITY OF FLINT

> *The basis of the manner in which solid metaphors work to link different cultural domains and construct meaning relates first of all to their internal qualities, their shape, structure, colour, texture and form.*
> Tilley (1999, 263)

This chapter explores the physicality of objects with the aim of examining the possibility that the artefact alone, its internal qualities, can reveal something of its ideological significance. It will be shown that ideation of artefacts is not only created at the site of interaction between human body and mind, by the physicality of the artefact, but within a much more numinous geography of past and present, of other artefacts and relations.

The nature of the connection between physical traits and social meaning (metaphoric referents) is first examined together with the question of whether artefacts can be said to have agency, a discussion apposite for understanding material metaphors (Tilley 1999, 263). Then two groups of physical traits are examined: materials (the physical substance of the artefact); and tool form. Certain types of social meaning, particularly the rare, exotic, association with wealth or prestige or added value, are particularly problematic and are interrelated. They are discussed in a separate section below (**4.4**).

4.1 TRAITS AND THEIR METAPHORIC REFERENTS

Artefacts are agents in so much as they affect human culture through their kinetic function as tools and though metaphor, but while agency is partly dependent upon physicality this does not determine but rather affords and constrains within a complex social web. Thus, we cannot know if materiality[21]is the primary cause of any action or belief.

For language, the relationship between the word and its meaning as a sign is purely arbitrary, but it is less so for the artefact (**2.3.2**). What an artefact signifies is at

[21] I here use the term 'materiality' to refer to the physicality of the artefact rather than a shorthand for understanding an artefact in the social and historical context of use by humans (Ingold 2007b, 32), although, of course, the two are interrelated.

least partly dependent on what it is and what it is made from (Roe 1995, 44; Hooper Greenhill 2000, 50, 103, 115; Jones 2004). This is not to say that physicality determines the message but rather physicality affords certain messages and constrains others (Gosden 1994, 77; Sinclair 2000; Jones 2004, 330). It also affects the way the message is transmitted.

However, the role of materiality cannot be understood by simply listing constraints and possibilities. For various reasons, ideological meaning results from tangled social interactions with and around the artefact itself, a recursive relationship between artefact and social relations, a mesh of ambiguous meaning. Ideology acts back on materiality. The ideation of artefacts is not simply through a direct bodily engagement with the artefact but also through indirect perception. Because perception is never pure, but partly a construct of culture, the salient physical attributes of objects vary between (Hooper-Greenhill 2000, 103), or even within, cultures. Additionally, the relationship between the physicality of an object and its metaphoric meaning is also influenced by the meaning derived from other artefacts and their physicality, and by history of such relationships. As Arroyo-Kalin (2004) contends, materiality is a result of 'ongoing outcomes' of engagement that are shaped by prior relations between agents and the material world. Moreover, object affordance may be negotiated and contested by different agents (Knappett 2004, 47).

This complexity means we cannot extract one primary causative factor, and demands a high level of detailed information on all aspects of a society, if it is to be understood by the modern researcher. This level of information is arguably not available to Egyptologists and thus the whole exercise could be regarded as futile. That said, the search for significant artefact traits and their possible metaphoric references is at least a first step toward understanding how artefacts operate. Moreover, several connections between material and metaphoric referent are similar cross-culturally, probably because of the universal way in which a particular material interacts with human society, that is, that it is at least partly a cause of the material (**Chapter 2 page 51**).

We first need to show that connections exist before studying the nature of connections between artefacts and metaphoric referents. A summary of plausible relationships for flint is given in **table 14**. Traits are listed in the first column and the second column suggests possible referents for that trait.

Traits are selected from a host of possibilities. Excluded examples include: flint's resistance to electrical current, its melting point, etc. Selection is made partly

from those traits which the ancients would have recognized; partly from traits which, according to ethnographic work, appear significant; and partly from prior beliefs concerning Egyptian culture. The same could be said of the referents. The table simplifies relationships between traits and referents which are then examined in greater detail.

As stated above, two types of trait may be discerned: the material from which the artefact is made; and the treatment of that material. The first five traits of **table 14** are derived from materiality. Certain physical traits, notably durability and size not only effect what the referent is but also the means of message transmission. Where pertinent these are also discussed.

Grician Pragmatics is used as a litmus test for possible metaphor (**2.2.2.8**). Evidence for the metaphorical importance of traits may be sought in archaeology and text through juxtaposition of traits with unlikely partners, where the connection can only be metaphoric. Any suggested metaphoric meaning must then make sense in immediate context and within the wider context of Egyptian ideology.

THE MATERIAL TOOL FORM	**Artefact Trait:**	**Possible Metaphoric Referent:**
	Fire producing properties of flint	Fire and other fire producing materials Snakes
	Sharpness of flint	Other sharp materials Danger
	Hardness of flint	Other hard materials Durability
	Durability	Primeval Exoticism and sublimation Prestige Previous owners/users
	Traditional material (few technological stages required and durability)	Primeval
	Origins	Eastern Desert Mountains Snakes
	Reduction strategy	Rites of passage
	Sound made in knapping	Storms
	Spall production	Creational Spitting snakes
	Colour selection	The celestial Origins of flint Colour metaphor/symbolism
	Colour enhancement	Luminosity Increased production costs Prestige Exoticism and sublimation Colour metaphor/symbolism
	Bifaces	Increased production costs Prestige
	Fragility	Increased production costs Copying traits of utilitarian forms Exoticism and sublimation
	Elaborate hafting	Increased production costs Prestige Exoticism and sublimation
	Oversharpening	Increased production costs
	Overly large items	Power Prestige Normal sized items Increased production costs Exoticism and sublimation
	Overly small items	Normal sized items Ability to be carried or placed on the person (amuletic) Exoticism
	Aesthetics	Exoticism and sublimation Wealth Prestige
	Non-utilitarian forms copying other items e.g. animals	Metaphoric of animals or animal traits
	Copying functional items in metaphoric ways	The functional item
	Table 14 : Artefact traits and possible referents	

One can see three different types of referents. One group is closely interrelated: aesthetics, production costs, wealth and prestige the exotic and sublime. These are an essential ingredient of ideology (**2.2.2.5**). The natures of these referents are briefly discussed at the end of this chapter (**4.4**). Other referents such as the celestial and spitting snakes are likewise connected with ideology, while certain other referents,

such as ‘other sharp materials’ do not link directly to ideology, though may do so indirectly.

It will be seen that both identification of significant traits and assessment of referents are heavily dependent upon contextual factors and also upon text. However, as these referents are frequently assumed from a physical examination they are discussed in this chapter, rather than in **Chapter 5** (which deals with contextual evidence) or **Chapter 6** (which deals with textual evidence).

4.2 MATERIALS

This section discusses the material of which the artefact is made rather than the physicality of the finished artefact, an area which Ingold (2007a and b) sees as the essential facet of materiality.

4.2.1 FIRE PRODUCING PROPERTIES

The connection between flint and fire is well known cross-culturally, and thus is possibly the result of the universal nature of flint interacting in human societies; when flint is struck with iron a spark is produced. In German the connection is made obvious by flint’s name ‘Feuerstein’. Sources contemporary with the Egyptians, such as the Greek Theophrastus (d. 287 B.C.) discuss striking stone to make fire (Theophrastus *Concerning Fire, 63*; Forbes 1966, 8–9). The link between flint and fire has meant that both may be used in parallel rituals. For example, as Rudebeck (1998, 312) notes, flint and fire were used in Lapland marriage ceremonies: ‘Just as the flint holds a disguised fire within itself, with which it is closely connected and which can be brought to life by a blow against an object, so also in both sexes a life is hidden, which through union between spouses comes forward by degrees in the living offspring.’

But did the Egyptians recognised that fire could be obtained from flint, is there evidence for its metaphoric importance and finally was the metaphoric referent really contingent upon the materiality or was it mediated through a more complex web of connections?

Archaeological evidence

Although the Egyptians used the fire-drill, which is attested archaeologically and iconographically (Newberry *et al*. 1896, 23, fig. 68, p. 5; Stocks 2003, 52–55), the ability of flint to produce sparks, particularly when struck with meteoric iron, must have been familiar. While no strike-a-lights have been found, they may have gone

unrecognised. A flint was found, for example, with a 'natural cup of pyrites' outside the temple area at Hierakonpolis (**maps 2, 6 and 8**; Adams 1994, Supplement, 59). Alternatively, the Egyptians may have preferred the fire-drill. Fire is more difficult to produce from flint and naturally occurring iron than from a fire-drill (Runnels 1994).

There are however, other possible connections between flint and fire. Sculpting with flint against hard stones such as rose granite produces an acrid burning smell (Stocks 1988, 264). It is generally agreed that flint was used for the manufacture of hard stone sculptures until the Late Period (Devaux 2000; Stocks 1988, 2003). The connection between fire and rock crystal may also have been apposite.

Textual evidence

Textual evidence suggests the flint-fire connection was significant. Here I only deal with aspects where fire itself is described. Fiery gods are described in **Chapter 6**.

Fire and flint are often paralleled in religious texts e.g. the Late Period–Early Ptolemaic Papyrus Bremner-Rhind 25, 7 reads: a fire 'it shall cut you with its (flint) knife' (Faulkner 1937, 170):

Bremner-Rhind 30, 18 reads 'with knives of flint, they burn thee in thy intestines' (Faulkner 1938, 44). 17th–20th Dynasty Papyrus Boulaq (Cairo CG58038) 9, 7-10 is discussed in **6.2.1.1**. The connection between the Lake of Fire and Lake of Two Knives is discussed in **6.3.2.3**. Flint and fire are divine weapons at once both creational and destructive, and properties of the Eye of Re (**glossary**). Both are described as 'sharp' (Zandee 1960, 152), they can 'lick' (*nsb*) (Zandee 1960, 137), they can both 'consume' (Eyre 2002, 173), both are 'struck' (*sḫt*) in manufacture. The word used in connection with flint knife manufacture or sharpening at Middle Kingdom Beni Hasan (**map 5**) is *sḫt* (to strike/make). In the New Kingdom this word also occurs in connection with fire (*WB* III, 467 (7–8)) and means 'to light a fire'. There is an obvious link between sun and fire and both the sun and moon are connected with flint (**Chapter 6**).

Artefact trait and the metaphoric referent

Connection between flint and fire could be mediated through third parties, for example, Seth, snakes or meteoric iron (**Chapter 6**). Here I deal briefly with less celestial third parties: arrows, heat treatment and/or knives.

Arrows are a common denominator of flint and fire as arrows may be tipped with either. Flint arrows are well known archaeologically (**Appendix 1, 9.4**) until at least the Saite Period. Fire arrows are recorded as gifts in the Amarna correspondence (CAD I 231a) and an arrow with flames is shown in an Early Dynastic III siege scene (both cited by Miller *et al.* 1986, 190). It is apposite that the word for shoot (an arrow) and kindle (a torch) were related to the word *sti*. The arrow is also connected with the goddesses of the Eye of Re, solar, fiery deities who may also be flinty (**6.2.2**).

Heat treatment of flint may also be a linking factor. Heat treatment is attested for the Predynastic (Holmes 1989, 459–464), though uncertain for the Dynastic. Werschkun (2007, 254) suggests possible heat treatment at Old Kingdom Giza (**map 4**). Excessive heat treatment may also produce spalling of flint, possibly relating to the spitting flint snake as discussed in **6.2.1.1**.

Thirdly, the connection between fire and knives in general may be significant, especially since *ds* can mean either knife or flint (**2.3.2.3**) and since knives were frequently made from flint. The combination of cutting and burning was often meted out to the enemies of Re (Zandee 1960, 133). Either the knife or flame determinative can be used for the branding iron *ȝbw* (*WB* I, 6 (18–23); **6.3.2.4**). Fire (*hh*) and cutting/knives are common metaphors for punishment in the Third Intermediate Period (Morshausser 1991, 2). Other similarities between knives and fire exist; for example, flames and knives are sharp and pointed, and both were thought to threaten the dead in the afterlife (Zandee 1960, 152), though see **6.7.4**.

Fire and rock crystal

As stated in **Chapter 2**, flint and rock crystal are closely connected in ancient Egypt, thus the fire/ rock crystal link may be apposite. Although Roman rather than Egyptian, Pliny the Elder, 23–79 A.D. (*Nat. Hist.* XXXVI.1999; XXXVII.28) discusses use of lenses (presumably of rock crystal) and mirrors to make fire in antiquity. It is not inconceivable that this possibility was widely known. Finely made rock crystal lenses are known, for example, on Old Kingdom statues (Lucas 1948, 122) and eyes are certainly connected with flint and with fire (**6.2.2.3**).

Conclusions: flint and fire

Although it cannot be proven that the Egyptians knew of flint's fire producing qualities, it would be remarkable if this were not known. It is clear, particularly from text from as early as the New Kingdom, that flint and fire were ideologically linked.

The connection is too frequent to be coincidental. In text the connection is never described in utilitarian terms, but rather as parallels and metaphor.

The association of flint and fire may also have: a) led to or resulted from flint's links with other fire 'producing' stones such as meteoric iron and rock crystal (6.3.2.1); b) enhanced the status of flint as the defensive tool *par excellence* (Aufrère 1991 I, 344); c) connected flint with solar deities (**6.2**). There is also the possibility that the following properties of flint enhanced or resulted from fiery connections: its ophidian connections (**6.2.1.1**); links with the celestial meteoric iron (**6.3.2.1**); links with the god Seth (**6.4.2**); shininess (discussed below), etc. Each of these other links has fiery relatives in turn.

4.2.2 SHARPNESS

Archaeological evidence suggests that the Egyptians very obviously recognised the sharpness of freshly knapped flint. Many tools requiring a sharp edge were made from the material including sickle blades, arrowheads, knives, razors, etc. (see Appendix 1).

The sharp quality of flint apparent in text has already been alluded to in **Chapter 2**. There is some suggestion that the quality had a metaphoric meaning. As was discussed in **2.3.2.3**, flint is linked with *mds*, perhaps literally 'from/as flint,' usually translated as 'sharp' and the stone is also linked with eyes, particularly the fiery Eye of Re (**Chapter 6**). As will be shown (**6.2.1.1, page 226**), sharp body parts, specifically teeth and nails, may also be described as flinty. In literal terms this makes little sense, suggesting use of metaphor.

The meaning of *mds* incorporates several ideas (**2.3.2.3**). Eyes of deities can be described as *mds*, on the surface similar to the western trope 'sharp-eyed', and, even 'flinty eyed'? It is, however, impossible to determine if the Egyptian term exactly parallels modern English metaphors. The description *mds* may also have included the punishing and fiery aspects of flint, particularly as it is used to describe the eyes of fearsome deities. That eyes of deities exude minerals is shown in Aufrère (1983) and see also **Chapter 6** where the Eye of Re is associated with flint. That *mds* includes the quality of seeing from afar might also be indicated by the fact that Apophis has a *mds* eye, also described as a far-seeing eye (Szpakowska 2003, 26). Gell (1998, 117–118) explains how in some societies seeing is considered comparable to touching. This helps explain why the act of seeing could be described using a sensation normally felt through touch, i.e. 'sharp'.

The sharpness of flint may also have reinforced the link between flint and fire. As Aufrère (1991 I, 344) states, this quality, together with flint's ability to produce fire make it the defensive tool *par excellence*. As will be shown below, the term *mds* may also be related to the luminous qualities both of stone and of eyes, particularly those of deities.

4.2.3 HARDNESS

For the Navaho, flint's power in part lay in its hardness (Reichard 1963, 556). Flint scores 7 on the Mohs scale. It is not the hardest material worked by the Egyptians so it is possible that this quality was not perceived as important. While flint is connected with other hard materials, notably hippopotamus ivory, meteoric iron, teeth and claws, it could be that flint is linked with these hard materials though other connections such as fire and celestial qualities. Hardness may or may not have been a cementing association.

In **Chapter 6**, textual evidence for the connection between flint and meteoric iron and flint's less direct connection with hippopotamus ivory through Taweret (**glossary**) and Seth is discussed. The hardness of hippopotamus ivory may possibly have linked it to flint. Poplin (1992) states that hippopotamus tusk is characterised by an extremely hard outer layer. It can reputedly ruin a bandsaw blade in seconds (Boone Trading Company). Because hippopotamus ivory is hard, it cannot be carved in the same way as softer materials. The 'knapping' of hippopotamus ivory brings it closer to flint (although 'chopping' may be a better description). Khlopatchev (2001) explains the process of 'knapping' ivory, whereby grooves are made longitudinally and then the pieces split by 'knapping'.

Flint and hippopotamus ivory may also be linked through their connection with fire. Poplin (1992) cites Aristotle and an article written in 1764 by Zerenghi, both of which link ivory and fire. The fire connection of ivory has persisted until relatively recent times. Chambers' Edinburgh Journal published in 1852 states that hippopotamus bones, when struck with iron, give off sparks (Chambers' Edinburgh Journal, No. 421, New Series, Jan. 24, 1852, 57–58). A recent television documentary (*The Dark Side of the Hippos* broadcast on Channel Five at 8pm on 31.5.2006) stated that hippopotamus tusk could reputedly stop bullets and in doing so produce sparks.

As regards meteoric iron, there is little Egyptian evidence suggesting its hardness was a salient factor. However, it could be that iron and flint are linked for

their celestial qualities rather than qualities of hardness. These are discussed in Chapter 6.

As stated above, in texts, claws, teeth and nails are sometimes described as 'flinty'. The association of teeth with stone is widespread and the link appears to be hardness. Among the Dani of the Irian Jaya province of Indonesia, soft rock is said to have 'no tooth' (Hampton 1999, 244). Aristotle thought claws and nails to be literally made of minerals (Poplin 1992)[22]. It is plausible that similar ideas were held in Egypt. It might also explain why an animal with fearsome claws, the lion, might be connected with flint. There is an additional factor specific to ancient Egypt: deities and the deceased may be described in mineral terms (**6.2.2**). Excepting the front half of snakes, it is however, specifically hard (one may also say sharp) body parts which Egyptians describe as flinty.

In theory, hardness could spawn a number of further referents, for example masculinity.

4.2.4 DURABILITY

The physical properties of flint include its hardness and resistance to decay; both potentially afford particular longevity or durability. For flint, this longevity may be carried to extremes so that an artefact can be passed down through generations, or even abandoned and reused at a later date. Durability itself and the desire to prolong the quality by curation can be seen as kinetically utilitarian in that it preserves use-life. The fact that some particularly difficult to curate items, such as type-4 knives (discussed below), were curated despite the fact that there were easily accessible functional alternatives, suggests that the durability of such items was important for metaphorical reasons. It is possible that flint's durability was linked with ancient Egyptian concepts of the archaic. However, referents possibly linked to its durability are very difficult to separate from referents linked to its ability to be worked with few technological stages, allowing it to be a traditional material. Both material factors could each link with flint's association with eternity and the perfect time of the gods. I return to this below.

Ethnographic evidence suggests that durability may equate to value of historical objects. Lane (2006, 417) claims that all societies, both past and present, ascribe value to historical objects. Cross-culturally, material durability refers to

[22] However it is unlikely that flint specifically was literally considered to be the material from which teeth etc. were composed, as the ancients did differentiate between different minerals.

cosmological issues concerning human death (Helms 2004, 124–125). Stone-house construction in Madagascar represents the strength of marital and familial ties (Jones 2004, 335). Stone is often ascribed this durability. In western societies the unyielding nature of stones is sometimes paralleled with implacability or an unforthcoming nature, often of certain individuals, demonstrated in metaphors such as ‘making silent stones speak’ or ‘getting blood out of a stone’.

The durability of flint artefacts, allowing their role as heirlooms (see Lillios 1999 with references to heirlooms), may result in their being ‘inscribed’ with further ideological qualities. The term ‘magical contagion’ was introduced in this thesis (**2.3.3.3**). An item from the past brings its earlier associations into the present. Artefacts owned by several generations may be thought to impart the power or prestige of previous owners; this would in turn sublimate them and enhance their desirability and the urge to further curate them. In New Zealand, Maori jade axes gained prestige through the various events with which they were associated (Clark 1965). In **5.2.4.9**, I discuss the possibility that this durability can also make items dangerous and necessitate their ritual killing. There is some evidence that heavily curated knives were ‘killed’ in ancient Egypt.

Archaeological evidence suggests that, for the Early Dynastic Period, stone vessels were especially made for the grave, as counterparts to pottery ones, which are largely from settlement sites. It has been suggested that, as stone is particularly durable, it enhanced the hoped-for eternal nature of the grave (Ogdon 1990, 17–22). The concept of the eternity and sacred nature of stone is archaeologically supported for later periods by stone temples. While temples were manufactured from stone, other buildings, including palaces, were largely constructed in mud brick. Temples and tombs were intended to last for ‘millions of years’. One would expect that this belief extended to stone knives. Certainly stone knives and other artefacts appear in graves and other sacred sites of the Early Dynastic and for knives through to the Middle Kingdom.

Other material factors such as its Eastern Desert origins (**4.2.6**); its association with primeval gods such as Seth (**6.4.2**); and primeval snake deities might also influence the perceived primeval quality of stone.

Curation

For actual proof that the longevity of flint was enhanced in ancient Egypt we need to consider curation. While archaeological evidence may be used to show whether or not

flint artefacts were curated in Egypt, text is probably more useful in discussing reasons why.

The first example, given here, concerning Early Dynastic bifacial arrows in a New Kingdom tomb, is dubious. I discuss these in more detail in **Appendix 1 (9.4)**. Briefly, finely made bifacial arrows were found in D29, a New Kingdom tomb at Abydos (Ashmolean 1896=1908 E2703 and Pitt-Rivers 1900.42.9–10; **plate 57**). The excavator believed them to be Early Dynastic (Randall-McIver and Mace 1902, 89) but they are more likely to be New Kingdom. They are not, therefore, examples of durability.

There is, however, stronger evidence for curation of flint knives. The so-called 'Main Deposit' at Hierakonpolis (**maps 2, 6 and 8**) dates to the late Predynastic but contains a number of items that are possibly earlier than the deposition itself. These include flint knives and other flint tools.

From a later date, a 5th Dynasty temple deposit at Elephantine (**map 8**; Dreyer 1976, 87, fig.26e; Dreyer 1986, 87, 136.351, fig. 45) contains, on typological comparison, a type-4 1st–3rd Dynasty knife (Dreyer suggests that such knives can date as late as the 3rd Dynasty, though all I have seen in publications and museums are from the 1st and occasionally 2nd Dynasty – see **Appendix 1 (9.1.2)**. Thus, the knife was kept for some time (at least 100 years and probably nearer 200 years) before deposition. One may wonder how such ancient artefacts were used. They may have been used in rites, or as offerings, particularly since they are found on sacred sites, (**Chapter 5**). Ethnographic studies show that heirlooms are often used in display (Lillios 1999). The knife is large. Flint knives, however, were not the only curated artefacts at this site. Small faience (**glossary**) items from a much earlier date were also deposited.

There is also convincing evidence that heirlooms occur in burials as well as temple deposits, again traditionally ritual contexts (5**.2.4**). Petrie (1914, 11, pl. 7) stated that he believed a type-4 knife had been placed in a grave many years later than the final deposit. He dated the other items in the grave to sequence date 81, which is now believed to be mid 1st Dynasty. However, type-4 knives are known from this Period so it is unclear as why Petrie considered this an heirloom (**Appendix 1, 9.1.2**). Hikade (1997) demonstrated that a knife, again a type-4, from the late 2nd Dynasty grave of Khasekemwy at Abydos (**map 4**) was handed down through generations before final deposition (illustrated on **plate 38**). The evidence is based upon typological similarities between this knife and 1st Dynasty examples found at Helwan

(**map 4**) and Saqqara (**map 4**), as well as evidence of use-wear. Given that such knives would be fragile, careful curation would be necessary for them to remain intact and must suggest that the tools were more than functional artefacts. A possible argument against such an early date for Hikade's knife is Dreyer's assertion that an example found at Elephantine (**map 8**), of the same type, bears comparison with 3rd Dynasty examples (Dreyer 1976, 87, fig.26e; Dreyer 1986, 87, 136.351, fig. 45). However, as stated above, I see these knives as no later than the 2nd Dynasty. Thus, on balance, the knife published by Hikade (1997) is probably 1st Dynasty. Even if we believe it be early 2nd, there would be still some hundred years between its manufacture and deposition. M6773 (**Appendix 2, plate 35**), also from 1st Dynasty Abydos (**map 4**), now in Manchester Museum, also shows heavy resharpening and this together with its thin, fragile form may suggest a long use life prior to deposition. It is similar in shape to Hikade's example.

There is also evidence for reuse of flint artefacts on settlement sites. However, that at Amarna may suggest 'opportunistic flaking of whatever material was available by competent but unspecialised knappers' (Miller 1987, 147). There is also an example from Middle Kingdom Desert Fayum (**maps 1, 3 ,4 and 5**; see Caton Thompson, redated by Ginter *et al.* 1980) of a Neolithic polished stone axe being reused. One might also add the example of the Ptolemaic farmhouse near Qasr el-Sagh (**maps 1, 4 and 5**; Caton-Thompson 1934, 147) where room 14 of house 1 contained 'Fragment of white earthenware bowl containing (pl. XCVII, 9) broken flint knife of Old Kingdom type.' Unfortunately, the drawing of the knife is so sketchy that it could be of any date, though given the lack of known Ptolemaic flint knives is certainly unlikely to be contemporary with the house.

However, in the last cases, was this a casual reuse of available material or was the older material deliberately chosen? Older material in later contexts need not necessarily imply any special regard for items of the past but may simply be expedient. There is only a reduced case for value of durability where reworking of earlier material shows that the item was made into a different tool, not used as the same tool. The argument of expediency is perhaps less valid for artefacts which appear from the degree of manufacturing effort expenditure, their size, or other factors, to have been the type of artefact which one would not expect to be casually discarded. If an artefact is 'special' one would not expect it to be casually discarded and then refound at a later date.

Curation is hinted at in text. A temple inventory of Abusir (5th Dynasty, the reign of king Isesi c.2427 BC) lists *psš-kf* knives, known from literature and iconography to be ritual (**6.7.1.3**), mostly broken and some repaired (**6.7.1.3**). Perhaps these special items were curated rather than casually discarded; one would expect a rich temple to be able to purchase new items where necessary.

Text may suggest reasons for curation. There is evidence that stone, generically, but unfortunately not flint specifically, was considered eternal, belonging to the sacred and primeval 'perfect time of the gods'. Routledge (2001, 315) stresses the importance of the primeval in the terms of Egyptian phrases *ỉr-ḫt* and *nt-ꜥ*. The primeval 'first times' were essential to the Egyptian notion of perfection and order. The permanence and immutability of stone suggests a direct link with the beginning of time, the age of the gods (Ogdon 1990, 17–22; Wilkinson 1999, 89). Thus, the *ben-ben* stone at Heliopolis is the site of creation; the cone shaped stone in the temple of Amun at Napata and that in the temple of Amun at Siwa (**map 3**) were thought of as the umbilical or navel of the world. Stone was an interface between this world and the next (Martin 1986, 873–875). This naturalises the connection between gods and flint knives in ancient Egypt (discussed in **Chapter 6**). The idea of flint emergence from the primeval hill and associations with the primeval snake are discussed in Graves-Brown (2006) and briefly in this thesis (**5.2.2.2**).

Plausibly, ancient artefacts within graves reaffirm ancestral links. The importance of ancestors and continuity in Egyptian ideology is shown in long-term use of individual cemeteries, belief in the perfect, early time of the gods, listing of kings in chronological succession with one being affiliated to the next, etc. In the late New Kingdom, *akh iker en Re* stelae (Demarée 1983), and probable use of ancestor busts (Friedman 1985, Harrington 2005)[23], show Egyptian cult practice involved ancestors. See also Fitzenreiter (1994) for general information on Egyptian ancestor worship which includes both textual and archaeological evidence. This reflection of ancestors, if this is how we interpret ancient artefacts in graves, may not however, be particular to flint material, and indeed, the evidence for flint in the grave declines in the later Old Kingdom (**Chapter 5**).

[23] Although ancestor stelae are of course archaeological artefacts they have traditionally been treated as textual artefacts with the writing and pictures thereon being translated to provide evidence.

Durability, its effect on message transmission

Gero (1989, 94, 100–101) suggests a correlation between artefact longevity and ability to encode social messages, concluding that for this reason flint might be particularly suited to message transmission. Durability is sometimes said to promote transmission of messages because durable items have more stylistic input than throwaway items (Wiessner 1983, 260), or because durable items can be seen by more people. However, visibility only allows the possibility of information exchange; it does not ensure it (Hill 1985; Plog 1983). While it is sometimes claimed that artefacts must be visible to signal (Wobst 1977; Sackett 1982, 1985), invisible artefacts also transmit social messages, implying less importance for visibility (Plog 1983, 138; Braun 1995, 134–136 with references).

Perishable materials were also used to transmit messages. Baines (2006, 8–16) describes extensive use of perishable amulets associated with Old Kingdom statues and Wendrich (2006) discusses the amuletic function of knotting perishable materials in Pharaonic Egypt. This however, concerned transmitting messages to the gods; thus visibility is perhaps not important.

Durability conclusions

In ancient Egypt, flint's durability may well have been salient. While this may be seen as maximising encoded social messages, the nature of the messages is debatable. Textual evidence for stone in general suggests a metaphoric link with the perfect time of the gods, the time of creation. This might explain the possible creational aspects of flint largely evidenced by text (**6.7.1**). Such metaphors are suited to rituals of rebirth, rituals common to ancient Egypt. However, there is another aspect of flint's materiality which may well afford association with creation and the perfect time of the gods, and to that aspect I now turn.

4.2.5 A TRADITIONAL MATERIAL

Perhaps because of its durability and because it was known as a traditional material, stone is often associated with the archaic. The use of stone as a traditional material, associated with the past, is a function of its materiality. A piece of flint can be picked up and worked to some extent by anyone; unlike iron for example, it does not first depend upon a complex extraction process. Complex technologies usually postdate simple ones. This aspect of materiality does not act alone however, as, when linked

with human predisposition toward tradition, it means that the new may not be trusted and/or there is a romance connected with the old.

Frazer (1922, 225–230) lists several examples where iron is tabooed and cases where, although stone tools are not normally used, they continue to be chosen for ritual purposes. Leach (1972, 394) states that many North American Indian tribes continued using stone for ritual long after it ceased to be used for secular purpose. There is also a biblical example. I Kings: 6, 7 can be translated 'When the house was built, it was with stone prepared at the quarry; so that neither hammer nor axe nor any tool of iron was heard in the temple, while it was being built.' For a parallel close to Egypt, it has also been postulated that tabular scrapers were used in the Bronze Age Levant for ritual purposes, largely unspecified, well into the metal age (Rosen 1997, 74).

In **Chapter 3**, I discussed the utilitarian decline of flint and show that throughout the Pharaonic Period flint was used everyday, though admittedly was in decline. If we look at its ritual use, this continued throughout the Bronze Age, and as we shall see in **Chapter 6**, textual evidence for its ideological significance seems to have increased at a time when general use of flint was in decline.

The reasons for flint's continued ritual use are hard to untangle. They may relate partly to the inflexible nature of religious practice, perhaps a distrust of the new or a romance associated with the old. Frazer (1922, 230) suggested that, cross-culturally, aversion to iron for rituals may have been due to a distrust of 'new' materials. There may also have been the emotional romance of using 'traditional' materials. Western society also uses archaic technology in ritual. For example, candles are still used in Church ceremonies, for birthday parties, etc., partly, one suspects, as they are imbued with the romance of the past and perhaps partly as traditional materials are thought more suitable for ritual. This does not mean that the electric light is not trusted.

For the ancient Egyptians it does not seem that any distrust of the new or romantic attachment to the old was the whole reason why flint was used in ritual as new materials were also used in rituals. Egyptian ritual use of metal knives is briefly discussed below (**4.3.10**). And indeed in other cultures metal and metal working was ritualised, for example in recent African societies (Herbert 1993; Schmidt 1997). In many societies, since the first metals were particularly soft, their use was either decorative, and/or cultic, not mechanically functional (Rosen 1997, 159–160).

The problem is that referents associated with the traditional nature of flint overlap with those which could alternatively be derived from flint's durability, notably

its association with the primeval and perfect time of the gods and with ancestors, as discussed above. One cannot be disentangled from another and all may have been mutually reinforcing.

4.2.6 ORIGINS

The origins, mystical or 'real' of a material may enhance the desirability of an artefact through association with exoticism or rarity or may relate to ideologies particular to specific geographical areas. Significant origins can sometimes be materially manifest. For example, cortex of flint can be indicative of quality and source (Crabtree 1967, 9). Rudebeck (1998) suggests that for Prehistoric Southern Scandinavia, cortex was deliberately left on tools to indicate source. Egyptian flint items, even those otherwise finely knapped, sometimes exhibit traces of cortex (e.g. British Museum EA67732; British Museum EA67735; UC16739, etc.). In Egypt, however, cortex is rarely regionally distinctive, and thus unlikely to signify origin.

Core colour may also indicate source and there is some evidence for colour selection in ancient Egypt, though possibly associated with factors other than source (**4.3.1**). There are other hints that the origins of flint were considered significant in Dynastic Egypt. Firstly, there is some suggestion that difficult to acquire raw materials were valued. Secondly, there is evidence that flint may have been worked on mountain-tops, implying the seeking out of difficult manufacturing areas. Thirdly, the evidence of the actual flint sources and the origins of flint, as suggested in text, are not identical, perhaps suggesting that the origins given in text are largely ideological. Fourthly, snakes and flint are closely linked, possibly because both are creational and associated with the earth. Rock crystal too is briefly discussed because of its close association with flint. Finally, it is possible that the source of the natural shaped 'simulacra' in Western Thebes (**map 7**) was significant. I now discuss these areas, with the exception of the Theban 'simulacra' which are discussed in Chapter 5.

Difficult to procure raw materials

The selection of difficult to procure raw materials may be associated with notions of scarcity, exoticism and danger, and used to signify prestige or other ideological facets such as the magico/religious. Elites can manipulate access to such material.

Outside Egypt there is ethnographic and archaeological evidence for selection of stone from dangerous places. For example, the greenstone used for Neolithic axes mined from Great Langdale in the Lake District of Britain was quarried from a high,

dangerous place. It is often suggested that part of its attraction was that it was difficult to access. Taçon (1991, 199) notes that for western Arnhem Land, Australia, the danger of the site may be deliberately enhanced to control access and to increase the power and prestige of site managers and tool owners. In both instances scarcity is also enhanced. It is clear that in Egypt, scarcity was not the only factor contributing to value. However, this does not mean it was insignificant.

As is shown in the section on colour (**4.3.1**), certain colours, or rather non-local flints identifiable through colour, were at times associated with the elite. Blades and knives, as opposed to chopping tools, were made of non-local materials at Abusir (**map 4**; Svoboda 1993). Although not rare, non-local flint would not have been easy to obtain. It could be argued that that it is not difficulty of procurement, but quality which was important. Pétrequin and Pétrequin (1993, 369) cite examples of circulation of stone axes in Irian Jaya, where the quality of the stone is directly related to the distances it is transported, thus difficult to acquire stone is desirable for functional reasons. Certainly, in Egypt, non-local mined flint would generally have been of a higher quality (Werschkun 2007a, 153). Inexplicably, however, the elite of Old Kingdom Giza (**map 4**) did not acquire mined produce from the nearest mine, that of Abu Roash (**maps 1 and 4**), but from an unknown more distant source (Werschkun 2007a, 153).

Following Scarre's (2002, 238) discussion of prehistoric colour one might ask if the colour indicated origins. This is possible though, as will be shown (**4.3.1**), it may also have had other connotations.

The distant origins of rock crystal may also have been significant. Rock crystal is rare compared with flint in Egypt, which conceivably made it exotic (see **4.4** for the significance of rarity/exoticism in Egyptian culture). Some rock crystal may have come from river gravels (Rizkana and Seeher 1985, 238), though other material could have been imported from Nubia (Zibelius-Chen 1988, 83). Rock crystal's location in river gravel would suggest a preceding Nubian origin, given the source of the Nile. It is possible that rock crystal is included in the lists of tribute from Nubia mentioned in P. Koller 4, 2 (Zibelius-Chen 1988, 44), though this depends on the material, *irḳbs*, being identified as rock crystal, which is debateable (Harris 1961, 100). Rock crystal is also reputedly found in the Western Desert and the Sinai Peninsula (Aston *et al*. 2000, 52). Nubia is significant as the birthplace of gods (Meeks and Favard-Meeks 1999, 91), at least in the later Dynastic period, and thus appropriate for this celestial stone. In the Early Dynastic Period, arrowheads, which are known from later texts to have solar

significance (Brunner-Traut 1956), are made of rock crystal. This is however, equating early artefacts with late text and thus may not be germane. There is no evidence that flint itself was associated with Nubia.

The deserts and East and West

In Egypt flint is found in the desert, particularly in wadis (**maps 1 and 2**; **Appendix 1**) and flint quarries are known from these areas. While most of these mines are in the east, a number are also in the west.

Text also suggests desert and eastern prospecting for flint. The arrow-maker in the *Satire of the Trades* goes out into the desert (Seibert 1967, 168; Helck 1970, 90), presumably to find flint to make arrows. Aufrère (1983, 13–14) demonstrates that deities extract power from the Eastern Desert, from whence, ideologically, minerals derive. Various sources suggest that minerals generally, though not flint specifically, were largely mined in the Eastern Desert (Aufrère 2001). Late Period *Papyrus Salt* 825 reads: 'A knife of flint from Eastern Behdet is brought. It came forth from Ra to repel his enemies by means of it' (Derchain 1965). Texts describe a flint serpent in the mountains of *Bꜣḫw. Bꜣḫw* is a mythical place in the east (Posener 1965, 76). In *BD* 108 Bakhu is in the east of the sky. However there is a version of *BD* 153B, translated by Allen (1974), where Bakhu is in the west. *Bꜣḫw*, is also a support of heaven (Posener 1965, 76)[24].

Thus, actual origins of flint are both east and west, and ideal origins are east. The orient is associated with danger and difficulty, as well as solar creation, and is the birthplace of minerals (Aufrère 1983, 18; 1991; 2001). Posener (1965) explains that the right (associated with the west for the Egyptians) is the place of honour. The left (the east) is the opposite and also associated with death. The Eastern desert is associated with difficulty and danger (Zandee 1960, 161). The east may be associated with death but from death comes rebirth.

Mountains

In Nubia, at Gebel Barkal (**map 9**) and Gebel Jumal, flint was taken from the desert and worked on the mountains at a time pre-dating the Egyptian New Kingdom (Kendall 1988; 2004, 6, footnote 3). This practice would appear more than utilitarian. The mountain top sites are not adjacent to settlements and appear as religious sites. One might posit this as a purely Nubian practice, however, large quantities of worked

[24] Interestingly, *wꜣḏ* also comes from Bakhu (Aufrère 1983, 18) and is associated with flint (**4.3.1**).

flint of unknown periods are also known from the mountains of both the East and West banks of Thebes (**map 7**; Pitt Rivers 1882; Findlay 1894). The quantity suggested to excavators that flint was carried there for the purpose of working (Pitt Rivers 1882, 384), despite the fact that it is accessible lower down. While the date of such sites is not established, the illustrations of a few flints (Pitt Rivers 1882, pl. 29 and 30) from one site shows Prehistoric types including a handaxe and a horned scraper typical of the Theban area. Thus, the practice may not have continued into the Dynastic era. While this does not prove Dynastic working of flint in dangerous places, evidence of earlier Predynastic flint working on mountains may have encouraged the Dynastic association of mountains and flint.

Snakes of mountains (the Mountain of Bakhu and Viper Mountain) are associated with flint from the Middle Kingdom onward (**Chapter 6**). However, it is possible that here it is the snake, not the mountain, which is relevant. Mountains are compared to shining flint (*ds ṯḥn*) in Ptolemaic Edfu (**maps 2 and 8**; Edfu VI, 202; Brugsch 1880, 964–965; Chassinat 1931; Aufrère 1983, 8, footnote 47).

The Middle Kingdom inscriptions from Wadi Hammamat (**map 3**; Buck 1948, 75, transliterated by Hannig 1995) describe mountains as primordial hills (pertinent for the link between flint and the primeval (see above and **5.2.2.2**). Aufrère (1991 I, 21–6; 2001) discusses connections between mountains and minerals in general. Minerals are found within mountains, implying the protection of the divine but also the primordial origin of the divine (Aufrère 2001, 159).

Snakes and flint, and the earth

The fact that flint is of the earth, mountains and desert may link it with other creatures of this type, such as snakes (**6.2.1.1**). The desert connection may also suggest lions, specifically as these are also a solar animal (**6.2.1.2**).

Origins conclusion

There is little Dynastic Period evidence that flint was deliberately selected from difficult to mine areas. However, there is textual evidence for an ideological link between flint, mountains and the east, and to a lesser extent snakes and desert animals, which appears to make no sense except in metaphoricic terms and may be associated with the primeval and with creation. Possible metaphoric reasons are further discussed in **Chapter 6**. We will see that there is also evidence that the specifically Theban nodules were associated with primeval origins (**5.2.2.2**).

4.2.7 REDUCTIVE STRATEGY

The fact that lithic technology is a reductive strategy may influence both its ability to carry social messages and the type of messages carried. These referents may be associated with rites of passage.

Reductive strategies limit signalling

It has been suggested that additive technologies such as pottery have more possibilities for style than reductive technologies such as lithics, and so additive technologies are more able to signal (Plog 1983, 137–138). However, possible styles for reductive technologies are still more numerous than those selected, suggesting reduction was not a limiting factor. If one posits that in Old Kingdom Egypt, pottery replaced flint in signalling (for decline of Old Kingdom flint see **5.2.4.5**), one might question why flint continued in ritual contexts until much later. If pottery was superior for signalling, why were the amuletic knives in the tomb of Tutankhamun made from flint rather than pottery?

Reductive strategies used in rites of passage

Reductive technologies may be apposite in 'rites of passage' ('rites of institution' Chapman 2000, 39–41). Chapman discusses deposition of fragmented items such as lithics and animal bone by 'hunter-gathers' at times of departure. As will be explained in **5.2.4.9**, fragmentation is incorporated into Egyptian funerary rituals and there is evidence that flint was connected with this. While lithic technology is reductive, in core fragmentation/reduction an item is 'born', a rebirth[25] metaphor suitable for burial. The reductive nature of flint may also give value to the spalls themselves, conceivably as creational entities (**4.2.9** and **6.7.3**).

4.2.8 KNAPPING SOUNDS

For the Navaho, the sound of flint when struck against another flint conjures the idea of lightening (Reichard 1963, 252–253, 556). In Egypt there are associations between flint and storm gods (**6.4**). However, while sound is a plausible contributing factor, the sound of the material is not otherwise salient in either textual or archaeological evidence.

[25] In this thesis the term 'rebirth' is applied loosely. I do not necessarily mean that the ancient Egyptians considered all routes to the afterlife in terms of human reproduction.

4.2.9 SPALL PRODUCTION

Spall (debris) production may have been ideologically significant. Spalls were important enough to warrant frequent inclusion in slaughter scenes, for example in the 5th Dynasty mastaba (**glossary**) of Hetepka (Martin 1979, 12). Spalls are illustrated even where other 'details', such as blood from the animal, are not. That spalls were themselves important is confirmed archaeologically by their occurrence in a special deposit at Hierakonpolis (**maps 2, 6 and 8**; Hoffman 1974, 46; **5.2.1**) and by their later use described in medical texts (**6.7.3**).

The visual effect of spalling can be likened to spitting, and since the spalls are sharp, this is lethal spitting. Certain flint snakes, and snakes more generally, are described as spitting (**6.2.1.1**). Spitting by flint snakes may also allude to flint spalling through over-heating (**4.2.1**), carried out in quarrying or to improve flint quality.

4.3 TOOL FORM

I now turn to areas concerning the flint tool, where the tool has been enhanced in ways which have no obvious kinetic advantage.

4.3.1 COLOURS/HUES/LUMINOSITY (SELECTION AND ENHANCEMENT)

Colour selection and colour enhancement are difficult to disentangle. Likewise, ideas of luminosity and colour may well have been undifferentiated in ancient Egypt. Colour, hue and luminosity clearly had ideological significance, possibly in relation to flint.

Ethnographic studies highlight a significant problem in using western colour terms as a basis for understanding colour generally, as 'Colour terms have meaning values, not just connotative colourings' (Chapman 2002, 48). Many colour words refer to all visual qualities (e.g. surface textures, especially shininess) except form and shape. As will be shown below, textual evidence from Egypt shows that the word 'colour' was not separately distinguished from 'texture' and 'hue' and furthermore that colour and luminosity were considered together.

Ethnographic studies of colour symbolism[26] (Scarre 2002 and Hovers *et al.* 2003, 493) often build upon cross-cultural linguistic studies suggesting that languages classify colours at their most basic in terms of black and white and then later red,

[26] 'Colour symbolism' is a widely recognised term and so is used here in place of 'colour metaphor'.

followed by other colours (e.g. Berlin and Kay 1969; Kay and McDaniel 1997 and references therein, though see Chapman 2003 and Young 2006 for critiques of the Berlin and Kay 'colour paradigm'). Neurological normatives are usually cited as explanation. Turner (1968) proposed a cross-cultural understanding of colour. He indicated that black, red and white tend to have the same symbolism cross-culturally, and that symbolism tends to relate to the human body, to semen and milk, blood, body dirts, excreta and putrefaction. The body connection emotionally charges colour concepts. Black is associated with the inferior, evil, pollution, suspicion; red is associated with power, wealth, might; and white with purity, light and joy. As tends to be the case with generalising propositions, his ideas have been much criticised (e.g. Boric 2002, 25–26; Young 2006, 178–179). Scarre (2002, 231, 237) however, supports the cross-cultural importance of these three colours.

In many languages black and white refer to dark and light (Wierzbicka cited in Chapman 2002, 50). White is almost universally positive and links with purity, spirits, etc. (Darville 2002, 74). For example, the Yoruba of West Africa associate white with the spirit world (Keates 2002, 116). Indeed, luminosity, brightness and shininess, with which white is closely associated, signifies the otherworld in several societies (Keates 2002, 118–122). The shiny/colourful nature of the celestial is ethnographically well attested (Goebs 1998, 458–459). Shininess is associated with power and is generally valued (Taçon 1999). There are ethnographic parallels for the particoloured/multicoloured denoting liminality among the Nuer, where skins of spotted felines are among liminal objects used to heal the wounds of initiates (Beidelman 1968, 121; Turner 1991, 142). The notion of pied Divinity is also common to the Dinka (Lienhardt 1961, 14, 46).

Wierzbicka (cited in Chapman 2002, 50) states that in many languages words for green also refer to vegetation generally. This concurs with Egyptian ideas of green, with its connotations of 'fresh', 'new', or 'wet' linked to fresh plant growth along the Nile following each Inundation (**glossary**).

Specifically for rock, there is a great deal of ethnographic evidence that white and shiny stones, including rock crystals, are metaphorically associated with purity, the spirit world and insight (Cooney 2002, 97; Keates 2002, 118–119). For example, in western Arnhem Land, Australia, quartz tools were particularly sought as they are bright, a quality also associated with life and Ancestral Beings (Taçon 1991, 198–199). Making and owning bright, shiny objects can be seen as a statement of social prestige, for example among the Amerindian elite, where kings were associated with the

celestial qualities of light and used shining jewellery to transmit this message (Saunders 2002, 216–219; 2003). The celestial connection of flint is well known ethnographically (**6.1.1**) suggesting that this in part rests upon the physicality of the material (**2.2.2.9**), and this physicality could well relate to flint's luminosity.

The problem for archaeologists lies in understanding past colour values. However, Gage (1999, 109) suggests that we may even be able to understand colour symbolism for prehistoric societies by cautious use of universals and consideration of context. Ancient colour symbolism may be understood by examining contexts within which different coloured objects are found (Jones and Bradley 1999, 113). While Jones (2004, 334) writes that archaeologists have rarely examined how colour is selected during artefact production, there are several exceptions: Bradley (1992); Jones and MacGregor (2002); Barfield (2003); Gage *et al.* (1999) and more recently Gaydarska and Chapman (2008). Bradley *et al.* (1992) showed that axe use in Neolithic Britain did not correlate with stone quality, therefore stone choice must have depended upon colour and texture. Barfield (2003, 109) stresses the importance of aesthetics, of which one may expect colour to be a part, in the metaphoric importance of stone and (Barfield 2003, 101) cites Clark and Higgs' (1960) work on colour preference for red stone in arrowhead and leaf-point manufacture in Neolithic Hurst Fen, Britain, suggesting that a simplistic interpretation may be that red was the colour of blood. The edited volume by Jones and MacGregor (2002) gives several examples of archaeological colour symbolism. These publications largely explore salient colours for a given artefact or group of artefacts found in the same context.

Archaeological evidence: colour

The colour range for flint tools in Egypt is subtle, though embraces white to black and shades between, as well as pinks, oranges and browns. At least, that is how they appear in western categorisation terms. I start with white and black, as they appear in several cultures to be diametrically opposed[27].

For the Predynastic, researchers have noted a preponderance of pale coloured flint selected for bifacial knives (Harris 1961, 139; Kelterborn 1984, 441; Holmes 1992, 39) and it is in the Pre–Early Dynastic that quartzite implements, notably knives and arrowheads, are best known e.g. the tomb of Djer (Spencer 1980, 100, pl. 79) and from Abydos (**map 4**; Petrie 1901, pl. 4, no. 14, pl. 6, nos. 6–7).

[27]I did not use a Munsell colour chart in looking at flint because one piece of flint can have many Munsell values.

Later quartzite implements are rarer and usually miniature, e.g. a model of a flint knife from First Intermediate Period el-Ashmunein (**maps 3 and 5**; Spencer 1993, 61, pl. 96) and quartzite arrowheads from the Thutmoside tomb of Sennemut (Hayes 1968, 212). Arrowheads in quartz, or its copy, glass (early writers tended to identify the material as quartz or rock crystal though McLeod agrees with the original excavators and identifies it as glass), were found in the tomb of Tutankhamun (McLeod 1982, 20).

At the opposite end of the colour spectrum, black flint is largely absent archaeologically (except for burnt pieces). Throughout Egyptian history however, obsidian, is used for amulets, though not for full-size implements. In the late Predynastic small tools were occasionally made from obsidian (e.g. Scharff 1926, 47–48, pl. 30.280–281) though greatly outnumbered by flint artefacts. I have found no certain instances of obsidian knives, though UC7570v and UC7570 xxiv from Middle Kingdom Lahun (**maps 4 and 5**) are black and could possibly be from this material. I now turn to subtler colour 'shades'.

Beginning at the 'micro-level' of assemblage, the arrowheads from New Kingdom tomb D29 at Abydos (**map 4**; **Appendix 1, 9.4; plate 57**) exhibit strikingly different colours which must have been selected. They cannot all have been produced from flint mined at one site. However, I have not found any other such obvious examples of selection for colour variation[28].

In considering colour variation in relation to tool type, Berlin 22842 (Scharff 1931, 63, pl. 5; Schoske 1990, 116 no. 94; **plate 4.1**) is an orange/yellow polished flint 'razor' or funerary palette. Four other examples of this type of tool, all from the tomb of Tutankhamun (Murray and Nuttall 1963, 32o; **plate 4.5**) are yellowish in colour. Tillmann (1992, 160) therefore suggests that these parallel metal forms. However, not all 'razors' are this colour, for example, UC11771 and UC59564 are both made from a pink/brown flint, and UC59564 from a mid-brown flint (**Appendix 2; plate 4**). Examination of flint in British museums shows no strong correlation in the type of flint chosen with artefact form (type)[29].

It may be fruitful to compare colour of material from settlements with that from burials. Unfortunately, since there is little settlement material available, either published, or in museum collections, at least until the Middle Kingdom, this is

[28] Patination was disregarded when considering colour.
[29] If one includes rock crystal, however, an exception may be made for Early Dynastic rock crystal arrowheads.

difficult. After the Middle Kingdom, flint is rarely used in graves and is largely found on settlements, again, making comparison difficult. However, Kromer (1978, 46–47) notes that all 'razors' found in the 'settlement' at Giza (**map 4**) were light to dark brown, while those from graves were yellowish grey.

The dominant flint colour is often chronologically and site specific. At Abydos (**map 4**) evidence from royal tombs shows that the local mid-brown flint with pinkish stripes was preferred during early Dynasty I (Hikade 2000, 15, 18–19; 2004, 58) but by the end of Dynasty I this was usurped by a caramel coloured flint, and from Dynasty II a chocolate brown variety predominated. This could be attributed to use of different sources rather than any colour ideology. The limited geographical coverage for these traits argues against an ideological explanation (**2.2.1**).

Early Dynastic preference for light stone and rock crystal seems proven. However, after the Early Dynastic, colour differentiation seems to be limited to a particular site or period. Possible exceptions are polished 'razors', and the connection between bifacial arrowheads and either light colours or variation in colours

Archaeological evidence: luminosity/shininess

As shown above, ethnographic parallels suggest that whiteness, brightness and shininess are related. The archaeological evidence now presented suggests brightness/shininess/luminosity was indeed valued in Egyptian lithics, at least in the Early Dynastic.

Flint is usually a lustrous stone because of its silica content. Polishing enhances natural colour as well as increasing shininess (Cooney 2002, 95). Polishing may not only relate to luminosity but also to increased production costs, aesthetic considerations, etc. However, if polishing takes place in a period in which other traits of luminosity such as use of light coloured materials is evident, this gives more weight to the equation of polishing with luminosity.

Polishing of artefacts is particularly prevalent in the Pre to Early Dynastic and often equates with finely made items, exhibiting great skill in manufacture. Ripple-flaked knives are the best known Egyptian polished lithics, often polished on one side and polished then flaked on the other (Midant-Reynes 1987). Such items tend to occur in elite Predynastic graves and are found more rarely in the Early Dynastic. PR.1901.40.24.9 and PR.1901.40.24.3 now in the Pitt-Rivers Museum are both

fragments of bifacial knives from the tomb of Djer at Abydos[30] (**map 4**). Caton-Thompson and Gardner (1934, 126, pl. 79.12) describe an Early Dynastic – Old Kingdom type-6 knife which appears to have been polished prior to final flaking. However, one might argue that as its final form is flaked, luminosity was not the desired end effect.

Other Dynastic polished items include 'funerary palettes' (**Appendix 1**; **plate 5**) and bracelets (**Appendix 1, 9.7; plate 66**), again largely from elite graves. The function of 'razors'/funerary palettes (**Appendix 17.44**, **plates 4-5** and **17-18**) is unknown, thus we cannot be sure that the polishing did not have utilitarian purpose. While some polished 'razors' are Old Kingdom in date, possible examples were found in the 18th Dynasty tomb of Tutankhamun (Murray and Nuttall 1963, 32o; **plate 5.2**), though here described as being made of 'hard, crystalline limestone'. Flint bracelets, some polished and others not, occur in the Early Dynastic through to the Old Kingdom.

Early Dynastic amuletic polished flint *psš-kf* are also known (e.g. British Museum EA37279; Petrie 1902, 24 and pl. 51.22; Spencer 1980, 101 (755), pl. 79). Later examples in other materials are published (Roth 1992). It is clear that these items are 'ritual' (**6.7.1.3**), though not all are polished.

'Burnishers' (**plate 3**) are also polished, but with the exception of UC134 from Amarna (**maps 3 and 5**), and thus probably New Kingdom or later, are largely undated. If these items are indeed goldsmith's burnishers, their polishing is necessary to their function (**Appendix 1.5**).

Flint axes are rarely polished, though there are two possible examples, M3546 from 1st–3rd Dynasty Koptos (**map 6**; **Appendix 2**) and an example from 3rd Dynasty Giza (**map 4**; Petrie 1907, pl. 111A). Old Kingdom polished stone axes are in materials other than flint. The polishing of the working edge may act as a utilitarian device, though polishing the whole surface is kinetically unnecessary.

The only other examples of polished artefacts of which I am aware include a 3rd Dynasty artefact from Mastaba T at Giza (Petrie 1907, 8, pl.3a). It is unclear what this is. It is about a foot long and 2 inches wide. It is not the standard shape to be the roughout of a ripple-flaked knife. Caton-Thompson and Gardner (1934, 26) also refer to 'the little polished rods of unknown use in the St Germain Museum found by de Morgan in the Abydos Royal tombs'. Two similarly strange unpublished pieces are PR.1901.40.26.2 and PR.1901.40.20, both from the tomb of Djer at Abydos (**map 4**).

[30] As these are burnt tips we cannot say if they are of the ripple-flaked type or not.

PR.1901.40.25 is perhaps a fragment of a polished knife handle again from the tomb of Djer.

Finally, there are 18th Dynasty flint and limestone knives with flint inclusions. The length of such knives varies from 100 to 168 mm. While this could arguably be considered within the range size of a small flint knife, they are not sharp enough to be used. Polishing of the 'working' edge makes the item useless for cutting. Polished flint knives have been found in the tomb of Tutankhamun (Murray and Nutall 1963, 32, p and q, 620/ 62, 63). These are similar to the seven 'limestone' miniature knives found in tomb TT 55 (Davis, 1910 reprinted 2001, 38, pl. 2) with flint inclusions (Bell 1990, 105, fig.3). Finally there is the unprovenanced example inscribed with the name and title of the Memphite High Priest of Ptah (**glossary**), Ptahmose (British Museum 5472, Hall 1931, 48, pl.7.1; Maystre 1992, 268). The fact that this is inscribed enhances its special nature. These knives are particularly interesting as their finds contexts plausibly connects them with the "opening of the mouth" ceremony (**5.2.4.7**).

It is self-evident that polishing may be equated with aesthetics, luminosity and/or increased production costs. Further, it is noticeable that most polished items (knives, bracelets, *psš-kf*) occur largely in wealthy graves of the Early Dynastic – mid Old Kingdom.

Unpolished flint items always greatly outnumber polished items. However, in the Early Dynastic, polished flint and rock crystal are particularly salient in elite graves, along with unpolished flint (their appearance on settlement sites is largely unquantifiable for this period due to excavation bias).

We have seen that ivory, flint and claws are connected (above, **4.2.3**). Archaeological evidence for this is particularly strong in the Early Dynastic (**6.2.1.2**) but indirect textual evidence continues until the Ptolemaic Period. One of the reasons for this connection could lie in the colour/luminosity of both flint and ivory.

Finally, as will be shown (**5.2.4.1**), there is slight evidence that flint artefacts were placed near the head of the deceased. Later textual evidence connects the head with the solar and it has been suggested that solar minerals were so placed to protect the deceased. The problem here is in using late text to explain an early archaeological phenomenon.

What was the metaphoric value of shiny stone in Egypt? Ethnographic parallels (see above) suggest shininess could metaphorically represent the celestial and/or power, particularly where enhanced by rarity and effort expenditure (see below), and

thus be associated with the elite. The connection between flint and the celestial is discussed in Chapter 6.

Alternatively, or additionally, luminous items could aid rebirth, as suggested for the juxtaposition of copper daggers and the ancestral dead in graves and iconography of Copper Age Italy (Keates 2002). Flint knives are not put in graves as afterlife weapons. Gilbert (2004, 33, 70) shows that the knife is unlikely to be a weapon and they are not even mentioned in McDermott (2004). They must therefore be significant in graves for other reasons and that of rebirth is plausible.

There is evidence that light and shiny materials more generally had cultic significance. A brief analysis of a 6th Dynasty deposit at Elephantine (**map 8**) from Dreyer (1986) shows that 'shiny' artefacts predominate, suggesting their metaphoric value at this time. Here, there are 457 numbered small finds (though some are groups of objects); of these, 402 are faience. The 12 flint tools listed are described as predominantly grey or light brown. Additionally items of ivory, limestone, pottery, gold, carnelian, breccia, sandstone, travertine, copper and unusual shaped natural flint pebbles and rock crystal were also deposited. In later periods coffins and shabti figures were varnished. Gold is also apparent in graves. Faience is discussed below as another shiny material associated with cultic places.

Related to luminosity is the notion of the multicoloured, as both may be considered dazzling. The juxtaposition of colour varieties in the fine bifacial arrowheads from grave D29 at Abydos (**map 4**) is such an example (**4.3.1; plate 57**), though I know of no others.

Textual evidence for Egypt

Modern western understanding of the word 'colour' is unlikely to correspond to any Egyptian linguistic term but instead is confused with terms for hue and texture (Baines 1985a, 284–285; Quirke 2001, 187–188). Egyptological textual and iconographic research has shown partial correspondence with ethnographically suggested colour categorisation in Egyptian religion: that the basic colours are black, white and red. Baines (2001, 155 footnote 2) discusses Quirke's suggestion that 'blue' should be the fourth basic Egyptian colour term.

It is clear from Egyptian artefacts that while the ancient Egyptians recognised many colours – they used pigments for reds, blues, brown, grey, pink, etc. – text shows that they only had abstract colour terms for black, white, red and green (Baines 1985b; Baines 2001, 145; Scarre 2002, 228). The different coloured pigments seem to have

been called by different names, but not the colours themselves. Thus, 'language is far less discriminating than perception' (Gage 1999, 112) and we should not assume that only colours used in text signified to the Egyptians. Colours were associated with certain minerals which exclude other colours (Aufrère 2001, 160). Thus, dark blue is indicated by reference to lapis lazuli, green for malachite and feldspar, etc. Flint is not a colour indicator, probably as it occurs in a number of different colours, and is rarely of a strongly distinctive hue.

Textual evidence shows that various colours were metaphoric in ancient Egypt. Black (*km*) is popular in Egyptian text in association with flint, used adjectively for the flint knife, as well as for some amulets. However, *km* does not just mean 'black' but also 'dark' (Quirke 2001, 188), thus it can mean 'brown' (Harris 1961, 228). Black was associated with the colour of Osiris and hence death and resurrection (Spence 1999, 115; Wilkinson 1999, 104–126; Taylor 2001, 166), the underworld, and was used in magical rituals to 'harness dangerous supernatural beings to protect or serve the officiant' (Pinch 2001, 183).

Examples of flint described as *km*:

a) Early Dynastic *PT* 290 (413) is discussed in **6.2.1.1**. An alternative version of the same spell describes a particoloured knife (the significance of 'particoloured/multicoloured' is discussed below).

b) In 13th Dynasty–Second Intermediate Period Papyrus Ramesseum V No. XVII, black flint is to be used to ease *štiwɜw* muscles (French translation in Bardinet 1995, 479; transcription and English translation in Barns 1956, 33; German translation in Deines *et al*. 1958, 32).

c) It also appears in Papyrus Ramesseum Nr. XX (French translation in Bardinet 1995, 475; transcription and English translation in Barns 1956, 34; German translation in Deines *et al*. 1958, 31).

d) Black flint is also used against eye ailments in New Kingdom Papyrus Ebers 59, 20 (375) (*WB* V, 486 (5); Deines *et al*. 1958, 42; Bardinet 1995, 307) and in Papyrus Ebers 62, 14–15 (412) (*WB* V, 486 (5); Bardinet 1995, 311; Deines *et al*. 1958, 43; cited in Aufrère 1991, 564, 568 note 20; Wreszinski 1913, 113).

e) At Ptolemaic Dendera (**map 6**), there are two references to the destruction of Seth using a black flint knife (**6.4.2**). The Ptolemaic Dendera amulet table discussed in **4.3.1**, describes black flint for some amulets and pale coloured flint for others. Black flint and gold is said to be associated with Decan 28 at Dendera (Chassinat IV, 177;

cited in Aufrère 1991 I, 180–181; Neugebauer and Parker 1969 III, 134–139; Midant-Reynes 1981, 42). It is possible that in some of these instances obsidian is meant rather than black flint (**2.3.2.3**).

I now turn to 'green'. In the *Pyramid Texts*, knives, presumably of stone, are described as *w3ḏ*, (e.g. Utterance 228 (228), discussed in **6.2.1.1**), generally translated as 'green' and usually explained as malachite or other green stones (Harris 1961, 104). The word *w3ḏ* can mean 'fresh' (Harris 1961, 225; Baines 1985b, 284; Pinch 2001, 183; Quirke 2001), possibly alluding to the *wḏ3t* eye[31]. The freshness or newness of flint may imply renewal and rebirth. There are allusions to green stone from the mountains, said to be the double of a serpent, in a Graeco-Roman demotic version of the solar eye myth in Papyrus Leiden I 384 (Smith 2002, 137). Harris (1961, 104–105) discusses *wḏ3wḏ3t* / *wḏ3ty* where the eyes of a statue are said to be made of this material. Since eyes of statues may be rock crystal there could be some connection between rock crystal, and *w3ḏ*. Aufrère (1983, 18) provides further references to *w3ḏ* eyes of gods, and further describes an instance of this from *B3ḫw*, thus making *w3ḏ* similar to flint in having eye (**6.2.2.3**) and *B3ḫw* (**6.2.1.1**) connections. There is textual evidence that *w3ḏ* can also mean the same hue as 'red' (Baines 1985b, 284; Quirke 2001, 188). It should also be pointed out that, for the Egyptians, there is evidence that what we would call 'blue' would have been classified as 'green' (Baines 1985b, 286; Bianch 1998, 30, footnote 61).

The word *ḥḏ* means more than 'white' but also incorporates 'bright' (Quirke 2001, 188). Text shows that generally *ḥḏ* implied purity and happiness (Kees 1943, 456; Aufrère 1991 II, 576; Spence 1999, 116; Taylor 2001, 165) and also means light and silver (Pinch 2001, 183; 2002, 183). Flint, as *ḥḏ*, appears in the Dendera amulet table (**4.3.1**), and similarly in a list of the 24 minerals presented at Khoiak as *ds ḥḏ ds km* (Mariette 1870 IV, pl. 39, col. 142). I have wondered if this means 'black and white flint' or as 'shiny, black flint'. *Ds ḥḏ* also appears as a material for offering trays (Louvre AA88; Breasted 1906 IV, 494–496; Vercoutter 1950, 85–114).

The meaning of *ds ṯḥn* is open to speculation, though normally considered a pale coloured flint (Harris 1961, 139). *Ds ṯḥn* in *CT* II, 237a is without the stone determinative. Faulkner (1977, 127) translates this as 'a gleaming knife'. The Ptolemaic Edfu (**maps 2 and 8**) mineral list, mentions *ds ṯḥn m sp3*, 'light flint from the place *sp3*' (Chassinat 1931 VI, 205, 5; cited in Harris 1961, 139 footnote 5). A light coloured flint, *ds ṯḥn*, from the 'big mountain' also occurs in Edfu VI, 1, 4–5

[31] *wḏ3* is a variant spelling of *w3ḏ* (Harris 1961, 104).

(Chassinat 1931; Aufrère 1983, footnote 47). The word *ṯḥn*, may be related to *ṯḥnt*, meaning 'sparkling (Harris 1961, 135). The religious significance of *ṯḥnt*, as a word for faience, is well known and associated with luminosity and scintillation, solar metaphors and rebirth (Friedman 1998, 15; Bianchi 1998, 24). The scintillating property of faience is given to explain its particular association with graves and other cultic places (faience is less common on settlement sites, though see Boyce 1989, 168 for a counter argument). The Dendera amulet list, discussed below, describes *ds ṯḥnt mꜣʿ* for various amulets. **2.3.2.3** concluded that this is likely to indicate shiny flint.

In *BD* 108 of the 18th Dynasty Papyrus of Nu, British Museum EA10477 (Lapp 1997, pl. 22), the snake on the mountain of Bakhu is described as: *m ds wbḫ n bšw*. This is further discussed in **6.2.1.1**, here I merely examine the word denoting colour or hue and shade, *wbḫ* (shining, bright, etc.). The translation would seem to be 'of shiny, spitting flint', an apt description of a fierce deity in snake form. *BD* 39 where light is discussed as *mdsw* with stone determinative is discussed in **Chapter 6**.

PT 376 (661) (transcription in Sethe 1969, 363–364; English translation in Faulkner 1969, 125) describes a possible glittering knife, which at this date would probably be of flint. Faulkner's translation is: 'O knife of the castrator, O shining one, shining one, Wnty, Wnty!....' The word for 'shining', *wbn*, could pertain to the knife. The word *wbn* may also mean 'to rise'. Alternatively, the reference may be to Wnty, or perhaps even to both, with Wnty being the personification of the knife. Interestingly, Wnty is a later name for Apophis, the arch-enemy of Re (Borghouts 1973, 120–121). Apophis, as will be shown in the section **6.2.1.1**, may himself be part flint.

Related to shininess is the idea of multicoloured. Both could be embraced by loose use of the term 'colourful'. *PT* 228 (228) describes the flint knife as *sꜣb*, usually translated as 'particoloured', 'multicoloured' or 'variegated' (though see **6.2.1.1** for an alternative reading).

I know of only one other occurrence of the word *sꜣb* in relation to flint. This is in the Ptolemaic amulet table at Dendera (cited in Harris 1961, 138 footnote 13 and 233; Midant-Reynes 1981, 42 footnote 32; Aufrère 1991, 568 footnote 35; Cauville *et al*. 1997 I, 217; Cauville *et al.* 1997 II, 187–191), where *ds km* is given in relation to a sign which appears to be a hieroglyph of a pair of feathers (S76) and a hide (F28), the latter may be transliterated *sꜣb*. The two may perhaps mean 'variegated feathers'.

Quirke (2001, 188) suggests that the word *sꜣb* may have 'referred originally or predominantly' to combinations of black, white and red/brown. Perhaps the word may be understood as 'colourful'. Divine snakes are designated *sꜣb.* Horus (**glossary**)

Behedeti is ‘multicoloured of plumage’ *sꜣb šwt*. Celestial cows and dog-faced guardians of the portals of the other-world may also be *sꜣb*. It is a word usually applied to animal skins and feathers (Baines 1985b, 286).

Vos (1998, 716) believes *sꜣb* has solar connections. Re-Horakhti rises from the horizon as a falcon with variegated feathers, possibly indicating his role as a god of light (Assmann, cited in Vos 1998, 716). Sobek (**glossary**), Lord of Colour, is described as shining. ‘His rays are the colours of the minerals and the vegetation’ (Vos 1998, 715–716). Vos gives other solar references referring to colour and solar theology.

Alternatively, perhaps the description ‘particoloured’ denotes liminality, both light and dark in one. The spotted skin is worn in ancient Egyptian culture by liminal beings, e.g. *sem*-priests (**glossary**), and the transfigured dead, and was placed over coffins until the Middle Kingdom. Occasionally the spots of the *sem*-priest outfit are portrayed as stars, suggesting a celestial link. It is also possible that the spottiness of the skin reflects the wild desert wilderness, a place on the margins of ‘civilisation,’ home of spotted beasts. Thus, there may be more to the denotation *sꜣb* than snake imagery; there may also be an allusion to the celestial and liminal. Here there is a possible link between the physicality of flint in its variegated patterning and its celestial nature (**6.2.1.1**).

Interestingly, the sceptre of flint in *BD* 125 (**6.3.2.2**) is either a *wꜣs* or a *ḏꜥm* sceptre. In some depictions, for example in the tomb of Amenemhat at Beni Hasan (**map 5**), the sceptre, which also has celestial connections, is shown with yellow and black spots.

It appears that there may be more than one word applied to the colourful, lustrous quality of flint: *ḥḏ*, *ṯḥn* and *wbḫ*. The word *wbn* may also be arguably applied to flint in the *Pyramid Texts*. The word *sꜣb* may be related in having connotations of the colourful celestial.

Goebs (1998; 2008) discusses the connection between the *wedjat* Eye, the white crown and the knife of Thoth (the *mds* knife, which may even be of flint – **2.3.2.3**) which in the *Pyramid Texts* are items necessary for rebirth and associated with the celestial and luminous. There is additional evidence suggesting that luminosity was a facilitator of rebirth throughout the Pharaonic period. Archaeological evidence is suggested above. Text suggests that coffins and other items linked with the dead were sometimes varnished to aid the deceased in achieving to a divine after life (Serpico and White 2001, 36–37; Taylor 2001, 166). As stated above, *ṯḥn* is related to *ṯḥnt*, a word

also used of faience, and is associated with luminosity, scintillation, solar metaphor and rebirth. Scintillation is a god-like characteristic. Gold was the colour of the flesh of the gods, and silver was their bones (Daumas 1956; Aufrère 2001, 160), sometimes cited as a reason why gold and gold coloured artefacts are common grave-goods in ancient Egypt. The aim was to be like the gods. The quality of shininess is also associated with the blessed or transfigured dead, the *3ḫw*, of Egyptian mythology. Their qualities of scintillation have been well studied by Egyptologists (for example Ritner 1993, 30ff who gives further references). The root of the word *3ḫw*, means either 'to be effective' or 'to be bright' (Wilson 1997, 16). Spells may be termed *3ḫw*, suggesting its role in creative magic. The word may even refer to a flame or a knife (*WB* I, 15). Since the latter construction is Graeco-Roman, it is presumably a metal knife. However, what this construction does suggest is that the shininess of a knife was significant, at least for this period.

Finally, while it was suggested that the term *mds* might refer to the sharp qualities of the Eye of Re/Horus, it also seems plausible that it refers to the luminous qualities of both eyes and flint. The glare and reflecting power to dazzle and repel of both the eyes of deities and of flint may have led to the association of flint with eyes. Furthermore, the nature of shininess of eyes and flint, its ability to transcend the otherworld and hence look beyond, even to the afterlife, could be implicated in the term *mds*.

Conclusions, colour and luminosity

It is clear that the colours of black and white, but also multicoloured and green, were important to the ancient Egyptians. In the Early Dynastic in particular, use of light flint (and rock crystal) and polishing suggest luminosity was desirable. At the same time other non-kinetic traits of lithics reinforce the suggestion of its strong ideological importance. If we look at the longer term, text shows that for the elite at least, flint's colour continued to be significant.

It may be apposite that flint ceases to be used for jewellery during the Old Kingdom. Jewellery, while conceivably purely aesthetic, was, in at least some later textual instances, metaphorically important. So, for example, the broad collar is given to the deceased in the afterlife. Since most raw materials of jewellery are colourful, white and/or shiny, the cessation of flint use in jewellery may further support the idea that flint had lost its ideological status in relation to colour.

Finally, continuing textual evidence of the importance of shiny flint might be explained by positing that texts were more conservative than burial rites, or alternatively that shiny flint remained ideologically important for the elite, while for the majority flint lost its 'magic' to metal. One might even argue that the ideology of flint in general is largely a facet of the elite.

4.3.3 BIFACES

As Gero (1989, 101) states, bifaces are obviously a product of increased production stages and thus are able to convey larger amounts of social information. Bifaces may also provide the referent of prestige through the mechanism of added value. From a strictly utilitarian point of view, killing a bull or shooting one's enemy could as easily be carried out using 'simpler' tools than a carefully made knife or bifacial arrowhead. A roughly shaped flake could dispatch the former, a transverse arrowhead the latter. The bifacial technique in such instances increases production costs, and arguably makes the item more aesthetically pleasing.

As will be shown in **Chapter 5**, bifaces, in the form of knives and arrowheads, are often, though not exclusively, 'ritual' tools associated with the temple and grave. While the link between bifaces and 'sacred' sites may possibly be due to the fact that more 'sacred' than 'profane' sites have been excavated for periods of biface production, the possibility is left open that the link may relate to a metaphorical referent, perhaps prestige.

However, bifaces do not have the monopoly in ideological contexts. For example, the execration rite at Mirgissa seems to have involved a simple blade (**maps 2 and 9**; **see Chapter 5**). It is clear that elaborate bifaces were available at this site and at this time and so would have been an available option. Similarly, mummification incisions seem to have employed simple blades, if flint was used at all (**6.7.1.2**). Arrows had ideological significance in the grave (**Chapter 5**) yet the transverse arrowhead was used for much of Dynastic Egypt as a common grave-good.

On the surface it seems that most Egyptian bifacial items are early. While bifacial axes, adzes and hoes continue until at least the New Kingdom, it could be argued that it would be difficult to make these in any other way, thus this need not relate to ritual. However, items such as knives and arrowheads, both made into the New Kingdom, could easily be made from simple flakes (and indeed were at times). Bifacial knives continue until at least the Third Intermediate Period (**Appendix 1:**

9.1.6), and it is knives which are, according to Egyptian textual sources, particularly salient in 'ritual,' and continue to be so until the Late Period.

4.3.4 ENHANCED FRAGILITY

Many bifaces are extremely fragile. Sinclair (1998, 14) suggested that the fragility of Upper Palaeolithic European bifacial lithic points suggests a non-utilitarian use. We might say the same for fragile Egyptian artefacts.

Early Dynastic flint bracelets are extremely fragile articles. They are, almost perversely, much thinner than shell bracelets of a similar date. Most bracelets, with the exception of an example from Tel Ibrahim Awad, come from graves or from the manufacturing site of Wadi el-Sheik (**map 1**; **Appendix 1, 9.7**).

The Early Dynastic elaborate flint knives, often so long and thin as to preclude robustness, are similarly delicate grave-goods. If they were used at all for cattle slaughter they surely can only have been used for the kill, cutting across the throat, rather than for any more heavy duty work. Even then there would be a risk of damaging the knife.

Some finely made flint knives are now thought to have been used for reaping. For example, the late Old Kingdom crescent shaped bifacial blade from Aïn Asil, Balat (Midant-Reynes 1998, 35, pl. 37; Roubet 1982; **Appendix 1, 9.1.1**) is similar to a 'knife' though the back is denticulated. A knife blade of the Old Kingdom from Tell el-Dabʿa (**map 4**) has sickle gloss (**glossary**; Tillmann 1992, fig. 76). The piece is broken but has the appearance of a straight-backed knife. M5383A of the Early Dynastic has gloss. A sickle with separate teeth may have been more robust, easier to repair and as efficient. However, silica gloss can also be produced through friction with wood (Jensen 1993). Werschkun (2007, 158) reports use-wear on some Giza (**map 4**) bifacial knives consistent with wood working. The use of 'knives' in sawing wood would not seem so inefficient as their use as sickle blades.

Dynastic bifacial arrowheads are relatively unusual, but extant (**Appendix 1: 9.4**) and largely found in graves. They could be classed as both over-elaborate and fragile for purpose. During the 1st dynasty there is a short-lived return to the manufacture of finely made bifacial arrowheads (Gilbert 2004, 50). Gilbert suggests that this may have been an effort to produce archaic forms for ritual purposes. New Kingdom examples are known from Abydos (**map 4**), Tell el-Dabʿa (**map 4**), Qantir (**map 4**), etc. (**Appendix 1, 9.4**; Graves-Brown in press). Fragility of arrowheads, can be seen as a useful utilitarian facet (**5.3.2**) but transverse arrowheads would be easier to

manufacture. If fragility was not required, more robust materials such as wood or ivory would suffice.

While one might argue that weapons are purely functional, Larick (1986) has studied spears in contemporary Africa and shown that, as well as practical weapons, they are also markers of age, ethnicity and social status. Archaeological evidence for ideology concerning weaponry is discussed by McDermott (2004) and explored in greater length in this thesis, **5.3**. To illustrate with a few examples: weapons are found in women's graves despite women being non-combatant (McDermott 2004, 56); a tomb model of a slaughter scene appears to show a 'ritual' act involving a spear (McDermott 2004, 80); bows seem to have been ritualistically broken at funerals (McDermott 2004, 56–57). Thus, one might suggest that the fragile nature of the flint enhanced its ideological importance.

Many of these fragile items come from graves. However, while it may be a utilitarian advantage to make flimsy items as it saves on production costs; in the case of these items, their production costs have been enhanced by fragility. Additionally, the context in graves enhances the likelihood of these items being ritual (**5.2**).

4.3.5 UNNECESSARY ENHANCEMENT: ELABORATE HAFTING

In the Early Dynastic, in particular, hafting can be particularly elaborate with ivory carved handles and sometimes incorporation of gold foil: a Predynastic or Early Dynastic flint bifacial knife seen by the author at Eton College had gold foil wrapped around it; a flint knife from the tomb of king Djer (Needler 1956) was likewise preserved; as was another knife in the Cairo museum (Needler 1956, 42). Whitehouse (2000) summarises known ivory handled knives. After the Early Dynastic Period, hafting is only evidenced by the occasional presence of cord wrapped around the handle (e.g. Petrie 1891, pl. 13.6). It is noticeable that elaborate hafting is associated with the fine Early Dynastic bifacial knives, which, as has been shown, are almost certainly ideologically significant.

It is not only flint knives which sport elaborate hafts. Certain sickles found in tombs appear more than functional. Some, e.g. the 18th Dynasty inscribed sickle British Museum EA52861 (Strudwick 2001, 29, pl. 8), have gold inlaid hafts. Such items may have been part of the funerary ritual, or were there for use in the afterlife. Agricultural scenes where the tomb owner is shown carrying out manual labour, such as that in Sennedjem's tomb, are believed to depict the deceased in the afterlife 'Field of Reeds' (**glossary**) where, according to *BD* 145, the deceased can gather large cereal

crops. One might suggest that the elaborate hafting is intended to reassert the prestige of the tomb owner, and/or to enforce the notion that these sickles were for afterlife use.

While elaborately hafted sickles seem to have been ritually important, it is unlikely that sickles with flint blades were always ritual items. The use of flint in sickles had a utilitarian element. Until the introduction of iron, there was no real competition for stone blades in harvesting (Rosen 1997, 163). Flint sickles are better than copper ones and equal to those of bronze (Steensberg 1943, 11–26 and Coles 1973, 34–39). Additionally, there are sickles found in tombs which do not have flint teeth, suggesting that flint was not considered essential to ritual sickles. For example, the tomb of Tutankhamun contained a sickle with blades of glass (Murray and Nuttall 1963, 17, no. 561). As glass of this date would have been a rare commodity, it seems that this was no everyday item. There is also textual evidence that flint was not a necessary component of ritual sickles generally. The Min (**glossary**) harvest ritual, as inscribed on the Ramesseum and at Medinet Habu, was to take place using a black sickle of *biȝ*[32] (Gauthier 1931, 61, 94, 227).

4.3.6 UNNECESSARY ENHANCEMENT: OVERSHARPENING

Recent work on wear analysis and resharpening of 5th–6th Dynasty knives from Abusir (**map 4**, Svoboda 2006, 511) suggests that knives were sharpened more extensively than was necessary for function only. Knives were retouched along the entire blade length and 75% showed no use-wear. This had probably been obliterated by sharpening. I return to this in **Chapter 5**.

4.3.7 SIZE

Scholars have discussed artefact size as a means of affecting social relationships. For example, Gero (1989, 93–94), following Wobst (1977), states that at the extreme large end are items which demand leadership and corporate labour and may establish new social relations. Such large items can 'broadcast to a large group of people'. She also states (following Wiessner 1983 and others) that size differences have been shown to be important for distinguishing ethnic affiliations. Gero (1989, 100) assumes that a decrease in the range of size variability in the later lithic assemblages of north-central highlands of Peru might suggest that lithics were losing their ability to carry social

[32] *Biȝ* may be translated as meteoric iron, a material, which, as stated in **Chapter 6**, is closely associated with flint.

information. Artefact length was used as a measure of overall size. However the results showed no enormous variation.

Others too have provided evidence that extreme small or large size might be more than utilitarian. Barfield (2003, 110) states that size represents one way of identifying symbolic (his term) axe-heads. In New Guinea larger axe-heads were valued as prestigious items (Strathern 1969, Hughes 1977). Malinowski (1961, 173), refers to "economic monstrosities'', which are not utilitarian, but through over-elaboration or oversize carry a high degree of social information and value. He (1934, 193) writes of the New Guinean desire for certain goods: 'Both producer and consumer like to make or acquire an article which is strikingly big, or strikingly finished, or of strikingly fine material, even though in the process the article were to become unwieldy, breakable and good for nothing else but display.' Extreme size, or extreme small size effectively precludes the object from utilitarian use (see also Braun 1995, 134–135; Roe 1995, 55).

Large size is related to greater visibility. Other things being equal, the larger the size and longer the use-life of an object, the more it will be visible (Wobst 1977, 322; Sackett 1982). Small items, because they are transportable, may also be able to communicate widely. Miniature items, because they are portable, can be seen by many people, though small size necessitates close physical contact to transmit messages (Gero 1989). Gero also states that because they are small they may be easily produced and thus suitable for transitory communication. We might also add that for the living, extreme small size allows transmission of social messages through display as body ornament. However, the part played by visibility in transmission of messages is open to doubt (**4.2.4**).

Size, however, concerns more than communication ability. It also influences the type of message. Large objects may, for example, be threatening or imposing (Hooper-Greenhill 2000, 113). Very small objects can also be hidden and made special or personal (Hooper-Greenhill 2000, 113). Size may relate to the social context, the individual actor, etc.

This complex picture suggests a contextual and holistic view must be attempted before assessing the importance or otherwise of size in relation to communication. This is beyond the scope of this thesis and here I am firstly concerned to suggest that extreme size had some bearing upon ideology and transference of messages. Evidence for the extreme size ranges of Egyptian flint tools is first explored and meaning discussed only briefly.

4.3.7.1 Small Size

Miniature items in ancient Egypt were frequently placed in graves or used as votive offerings, presumably as a substitute for the full sized artefact and/or to function as protective amulets.

The link between miniature items and amulets should not be assumed. Firstly, not all amulets are miniature. Some scarab 'amulets'are much larger than the actual animal. Miniature items may also function as toys. Tutankhamun, in Egyptian terms an adult, had in his grave artefacts which are usually agreed to be toys, thus the connection between items found in children's graves and toys is debateable. Also, some amulets do not take the form of miniature functional items, and miniature items are not always amuletic but may be votive. One might assume, however, that items closely associated with an individual are more likely to be protective (i.e. amuletic).

A casual glance at any collection of Egyptian amulets, or at books on Egyptian amulets (e.g. Andrews 1994) shows that faience rather than flint was the most commonly used. In contrast, texts suggest that flint was considered suitable.

However, there are rare examples of flint miniature items, though whether they functioned as amulets or votive deposits is debateable. Petrie (1902, 24 pl. 51) found a miniature Early Dynastic flint knife in the town of Abydos (**map 4**). Two First Intermediate Period model knives, one in crystal, were found at el-Ashmunein cemetery (**maps 3 and 5**) though perhaps not originally in close proximity to a body (Spencer 1993, 61, pl. 96. nos. 314 and 315). Early Dynastic amuletic flint *psš-kf* are also known (e.g. British Museum EA37279 (Petrie 1902, 24 and pl. 51.22; Spencer 1980, 101 (755), pl. 79).

Though this section is concerned with miniature versions of functional forms, 'formless' amulets are also significant. 'Amuletic flints' of non-tool form occur at Deir el-Medina (**map 7**), presumably New Kingdom in date (Bruyère 1933, 7) and a pendant of 'roughly ground and pierced' black flint was found at Tanis, possibly dating to the Ptolemaic Period (Petrie 1885, 34). The fact that these items were pierced suggests they were designed to be worn close to the body.

We also have textual evidence for flint amulets. The New Kingdom Berlin amulet board (Berlin 20600) lists amulets and the materials from which they should be made. However, on this an amulet of quartz is labelled *ds*.

The Ptolemaic temple of Dendera (**map 6**) has an amulet board inscribed on a wall (Mariette 1870 IV, pl. 87; Harris 1961, 138 footnote 13; Midant-Reynes 1981, 42

footnote 32; Cauville 1997 II, fig. 12; Cauville *et al*. 1997 I, 400). The materials from which amulets, both the flint and non-flint, are made in the Dendera table, are, according to Cauville (Cauville 1997 II, 189–191) similar to actual amulets from the Louvre. However, Cauville translates *ds km* as obsidian and shows that amulets in the shape of plumes/*psš-kf* are commonly made of obsidian; likewise there are obsidian scarabs and *wedjat* eyes. Interestingly, according to Cauville's list, there is also at least one flint djed-pillar in the Louvre (I have not seen any in museum collections, though cataloguers may simply not have recognised them). While I would agree with Cauville in the case of obsidian, I know of no archaeological examples of flint amulets as given by the Dendera table, except for Early Dynastic *psš-kf* (Roth 1992). For a more complete discussion of the *psš-kf* see **6.3.2.1**.

Marriette, Harris, Midant-Reynes and Cauville give slightly different versions of the Dendera table. Flint (*ds*) is mentioned three times. In Mariette's version, two citations of *ds* are not clear. Harris (1961, 138 footnote 13) sees two mentions of *ds* and Cauville (1997 II, fig. 12; Cauville *et al*. 1997 I, 400) shows three.

Here I shall deal with each instance of flint on the Dendera table, as shown by Cauville, in turn, as they appear on the table from right to left.

- The first instance of flint is not clear in Mariette's drawing but it is included in Cauville (Cauville 1997 II, fig. 12; Cauville *et al*. 1997 I, 400.6). It is also discussed in Harris (1961, 233); Cauville (Cauville 1997 I, 216); and Midant-Reynes (1981, 42 footnote 32). The table lists *ds ṯḥnt mꜣꜥ* as used for a scarab, a figure of Thoth, a *ḏd* pillar, a *wꜣḏ* sceptre and a *wḏꜣt* eye. See **2.3.2.3** for various translations of this material.
- The second instance is not clear in Mariette's drawing. In Cauville (Cauville 1997 II, fig. 12; Cauville *et al*. 1997 I, 400.11) it appears as *ds ḥḏ km*[33]. Cauville (Cauville 1997 I, 217) discusses it and concludes that it is used for a *psš-kf* and a Re amulet. However, as the drawing is not entirely clear, I wonder rather whether this only actually shows a pair of plumes as in the third instance given below. It is not mentioned in Harris (1961) or Midant-Reynes (1981).
- This instance is cited in Harris (1961, 138 footnote 13 and 233); Midant-Reynes (1981, 42 footnote 32); Aufrère (1991, 568 footnote 35); Cauville

[33] In Chapter 2, I discuss the possibility that this may refer to rock crystal but also state why I believe it more likely to be flint.

(1997 I, 217; 1997 I, 187–191; Cauville *et al*. 1997 I, 400. 14). The material is given as *ds km.*

No stone determinative is given but as this is a material from which amulets are made it must be either black flint or obsidian. In this amulet table *ds km* is cited for two amulets. One is S76, a pair of plumes in the Gardiner extended list and the other is F28, an animal skin, a symbol (an iconic and univocal metaphor) used as a determinative for dappled. Midant-Reynes (1981, 42) sees the two amulets as a pair of plumes ('forme ultime du psš-kf') and an animal skin, 'peau (?)'. Harris (1961, 233) states that *ds km* refers to 'a pair of feathers and what appears to be a hide'. I am unclear as to what these may be but wonder if the meaning is 'dappled plumes' rather than a pair of plumes and a skin. Cauville's hieroglyphic drawing (Cauville 1997 II, fig. 12; Cauville *et al*. 1997 I, 400.14) does not show a hide at all, though other authors seem to agree on its existence. The word *sȝb*, dappled, variegated or multi-coloured, is associated elsewhere with flint, though is usually associated with animal hides or feathers (**6.2.1.1**).

Another inscription mentioning flint, Dendera X, 234, is only cited by Cauville (Cauville 1997 I, 123; Cauville *et al*. 1997 I, 234). Here flint and faience are mentioned together with the god *Fnḏ.f-ˁnḫ* of Khentiabet. Cauville interprets this as a faience and flint amulet of 26cm long (Cauville 1997 II, 116). This seems a reasonable interpretation, though I know of few actual amulets of this size, and none manufactured of both faience and flint.

At the Ptolemaic temple of Edfu (**maps 2 and 8**; VI, 299, 12) another amuletic table is inscribed on a wall. The transcription is given in Chassinat (Chassinat 1931, 299, 12; cited in Aufrère 1991, 565 and 568 footnote 36 with transliteration; Midant-Reynes 1981, 42). Chassinat transcribes the stone determinative (**glossary**). Aufrère's transcription is: *tȝ-wrt n(t) ds ḥnˁ biȝ*, which I would translate as 'a Taweret (amulet) of flint and meteoric iron'. As shown in **Chapter 6**, Taweret is connected with the northern sky, a realm of both flint and meteoric iron.

4.3.7.2 Large size

Overly large items may metaphorically represent power, prestige, normal sized artefacts, increased production costs, or may have aesthetic concerns and be classified

as attention focusing devices. As stated above, large size may also mean that any transmitted message will reach a wide group of people gathered in one area, that is large items are useful for display purposes.

Most evidence for oversize artefacts is archaeological. The only textual evidence is the 26cm long amulet from Dendera (**map 6**) cited above. Oversize flint tools are known from the Pre-Dynastic to Early Dynastic Periods. Their use in display seems likely but remains unproven. Oversize monstrosities, such as the two roughly flaked flint knives from the Hierakonpolis temple area (c. 3100 B.C.; **maps 2, 6 and 8**; Quibell 1900, 6, pl. 3; Adams 1995) measuring c. 60cm and 75cm long, are so large as to be kinetically unusable. Other smaller knives, though still larger than necessary in a purely utilitarian sense, come from graves. These include those from the tomb of Hemaka at Saqqara (**map 4**) being from 25 to 41 cm long (Emery 1938, 19). An example from Helwan (**map 4**) excavated by Saad was 41.5cm long (Saad, 1951, pl. 7; Hikade 1999, 55 fig. 4) and another broken example was 50cm long (Saad 1951, pl. 63b). An example from the tomb of King Djer is 37cm long. The largest known formally shaped[34] example is from Abydos (**map 4**; Hikade 1997) measuring 72cm long. The particularly large knives, mainly of type-4, seem not to extend into the Old Kingdom (**Appendix 1**).

One could see the decrease in oversize knives as either resulting from decline in knapping standards, or reduction in need for such items. Large size enabled artefacts to be seen from a distance, possibly for use in processions or other ceremonies. One might expect that oversized implements were particularly associated with public performances. From a study of textual evidence, Routledge (2001; **2.2.1.1**) leaves no doubt that the Egyptians considered performance itself as equivalent to what we may loosely categorise as 'ritual'.

Use of 'standards' to represent territories is known for Early Dynastic Egypt. Interestingly, textual evidence shows that the 22nd nome (**glossary**) of Upper Egypt bore the name *w3ḏ.t* and had the symbol of a 'knife'. The territory stretches from Atfih to Memphis along the Eastern Desert (though there are indications that the Fayum, **maps 1, 3, 4 and 5**, once belonged to this territory). At least some of these nomes have their origins in the Predynastic Period. There are pictures of the carrying of standards in processions. The standards on the Narmer palette, for example, are said to depict the names of kings. However, I have found no examples of processions of nome standards, though there are processions of deities representing nomes.

[34] As opposed to the very roughly shaped knives from Hierakonpolis.

Oversize flint items in the Late Predynastic-Early Dynastic are paralleled by oversize items in other materials, especially from Hierakonpolis, for example, the Narmer Palette, the Narmer Macehead and the Scorpion Macehead. These come from deposits which could be interpreted as 'votive' or sacred discard (the archaeological context is not clear, though the Narmer Macehead appears to come from the 'Main Deposit' at Hierakonpolis). Such items may have been used prior to deposition, or even made especially for deposition. See Dreyer (1986, 37–46) for a discussion of comparable deposits and **page 203** for a further discussion of the Hierkonpolis deposits. Indeed, it is possible that the items were disposed of after having ceased to be of use in ritual, but important enough to be carefully discarded. However, some items from the 'Main Deposit' seem profane and are not oversize, for example, drill bits (Quibell 1900, pl. 24, 24–27).

Since most ancient Egyptian oversize monuments and artefacts are associated with royalty or gods, and, given the tendency of the Egyptians to indicate importance by size, it could be that oversize flint knives are intended to appear important, like gods or royalty.

Conclusion-artefact size

We have archaeological evidence for miniature and oversize flint artefacts. Evidence for oversize artefacts appears confined to the Early Dynastic, when, we have seen, there is also evidence for use of rare materials such as rock crystal for items commonly made of flint and for over-elaboration of lithic 'tools'.

Without additional evidence, it is difficult to decode the messages broadcast. However, since the messages are unlikely to merely be as banal as 'we have a small/large flint artefact' we may assume them to be metaphoric. In the case of amulets, it is usually the case that the miniature artefact stands in some way for the properties of the 'real' artefact. Such meanings are well documented for Egypt (Petrie 1914; Andrews 1994). Similarly, one would expect an oversize artefact to represent certain properties of the utilitarian tool.

4.3.8 AESTHETICS

Several traits (fragility, colour, elaborate hafting, size, etc.) may conspire to produce the aesthetically pleasing, which I here discuss as a trait in its own right. Aesthetics are often said to be linked with ideas of prestige, the exotic and 'the Other', which are

discussed below. The problem is that aesthetics are a modern, culturally dependent idea not easily applicable to ancient Egypt.

What we call Egyptian 'art' had utilitarian function for the Egyptians. So, for example, most Egyptologists agree that tomb paintings functioned to enable the deceased to reach or function in the afterlife. We do not know if the Egyptians also found tomb paintings aesthetically pleasing. Even a description of an item as *nfr* (usually translated' as beautiful) is not adequate since *nfr* does not equate exactly to the modern term 'beautiful' but includes elements of newness, greenness and perfection.

What can be said is that firstly it is plausible that what we call 'aesthetics' had a moral or religious element and secondly that aesthetic items were attention focussing. Gell, using ethnographic parallels, has called the type of technological effort, which aims to 'cast a spell over us,' 'the technology of enchantment' (Gell 1992), an effect brought about by rendering the means of creation incomprehensible to the viewer. This technology sublimates the artefact, and often this is linked to moral values, to religion and magic (Gell 1992; 1998). The items which appear to exhibit this particular type of technological effort in ancient Egypt, fine bifacial knives, for example, are frequently equated with tombs and temples (**5.2.1**), areas replete with magic/religious significance. Secondly, items which are 'decorated' are attention attracting (Langer 1979) and attention focussing devices, are among archaeological indicators of ritual (Renfrew 1994, 51). Again, this applies to the elaborate bifacial knives, which were discussed above.

4.3.9 FLINT ANIMALS

Hendrickx *et al.* (1997–1998) list some 56 flint animals, mainly from the Predynastic and Early Dynastic Periods (**Appendix 1**). Flint animals must be classed as non-utilitarian. However, it is difficult to see any overarching ritual purpose for them. To summarise the findings:– As over half the examples known are attributable to Hierakonpolis (**maps 2, 6 and 8**), Friedman (2000, 14) has suggested this may be a local industry. It is possible that, although most are found on burial sites (one was found in a domestic rubbish pit at Hierakonpolis – Watrall 2000, 11–12), they may not have been destined for the grave. They are not a normal feature of burials, but rather occur in a limited number of royal graves. Hendrickx concludes that they may serve multiple purposes. Those from elite tombs are perhaps politico-religious (e.g. the bulls' heads, falcons, hippopotami and giraffes); some may be apotropaic (e.g. the crocodile,

snakes and scorpions); others may be offerings (e.g. fish and birds). It is even possible that they may be toys, but wooden toys would surely have been easier to make.

As there appears no practical reason for their manufacture, their relevance may lie in the non-utilitarian aspects surrounding either animals or flint. Animals are often associated with particular gods and goddesses, and in themselves animals portray a variety of traits. They may also represent particular nomes. The wide variety of animal forms represented by the Pre-Early Dynastic flint animals makes any generalisation impossible.

The ideological significance of animals has long been studied in Egyptology and these items could have any number of meanings. One cannot deduce any special link with flint, particularly as at this time a great many items were made of flint. Finally, contemporary animal forms are also made of limestone, pottery, faience, etc., and a number appear in 'ritual' sites (e.g. as temple deposits at Hierakonpolis, Elephantine (**map 8**) and Abydos cited in Kemp 1989, fig. 24).

4.3.10 METAPHORIC COPIES OF UTILITARIAN FORMS

Any kinetically unusable artefact, whether it is unusable by being too small or large, too fragile, etc., must surely have been made to embody at least some qualities of corresponding functional artefacts. The same applies when the non-kinetically usable form copies a natural form such as an animal. In Egypt, the two most commonly manufactured flint items which are made as to be unusable are flint animals and flint knives (both discussed above) which are common to the Early Dynastic Period.

Flint knives tend to be unusable by virtue of their size or fragility. However, an example from 1st Dynasty Abydos (**map 4**) appeared so roughly made as to be unusable (Petrie 1903b, 27, pl. 10.228). This example was also found in an area with limestone animals and a flint snake and would seem to have been deposited as an offering.

Here I discuss possible meanings to the forms.

Knives

There is obviously a close ideational link between flint and knives in ancient Egypt; one would assume because knives were frequently made from flint. One of the words for knife in ancient Egyptian is the same as that for flint (**2.3.2.3**). It would therefore

seem appropriate to examine the metaphor behind the knife and assume that flint knives and metal knives had some similar metaphoric connections.

However, I begin with a knife that, because of its early date, was made of flint, the Early Dynastic- Early Old Kingdom crescent-shaped knife. The earliest known metal knives are not crescent-shaped but straight. The crescent-shaped flint knife is distinctive to Egypt and is associated with the moon of Thoth (**2.3.2.3**; Kees 1925, 1965). It is possible that later knives took on this association and hence later textual information concerning Thoth and his knife (**Chapter 6**).

The metaphoric importance of knives and cutting in general, as opposed to flint knives, has received some discussion in Egyptology (Zandee 1960, 147–158; Morschauser 1991, 23, 31–35, 135–143, 265; Wilkinson 1992, 189; Ritner 1993, 163–167; Stevens 2006, 204–205). Kees also examines links between the knife and Isis/Hathor (**glossary**) and the wandering Eye of Re. The knife form is particularly associated with protection (Stevens 2006, 205), though Morschauser (1991, 102–109) specifically states that the invocation of the knife was used as a threat. Fire and knives are common metaphors for punishment in the Third Intermediate and Late Period (Morschauser 1991, 265), and knives were commonly thought to threaten the deceased throughout Dynastic Egypt (Zandee 1960, 147–158). Knives are also apotropaic, and held by apotropaic deities such as Bes (**glossary**) and Taweret, as well as by guardians to the doors of the underworld (Ritner 1993, 163–167).) Snakes are also connected with knives in general (**Chapter 6**).

Metal, as well as flint knives, are associated with ritual. To give a few examples: An unprovenanced 18th Dynasty knife, now in the Rijksmuseum van Oudheden, is decorated with a Bes image and a scorpion (F1984/4.3; Schneider 1997, 86, no. 118 cited in Stevens 2006, 205). An 18th Dynasty Egyptian style chapel at Askut (**map 9**) included remains of cult material. At the entrance to the sanctuary were balls of incense and a metal knife (Smith 2003, 125). Metal knives are depicted in slaughter scenes from the New Kingdom.

A further suggestion that the knife form is important, whatever the material, is the copying of knives in material obviously unsuited to any kinetic purpose. For example, a pottery knife measuring 24 cm long is illustrated and described in Scharff (Berlin 14370 1931, 60–61, pl. 4.95). Unfortunately, the dating of this is not precise, but it appears to be Prehistoric. A slate knife probably of the Naqada I–II period is also known from el-Ma'mriya (Brooklyn 07.447.621 Needler 1984, 277, fig. 175). An

unusable lead model knife was found in Greek layers at Abydos (**map 4**; Petrie 1903b, 31, pl. 15.13).

The arrow

We have clear proof of ideology surrounding the arrow form, the Eye of Re (Brunner-Traut 1956; McDermott). The idea of the sacred arrow goes back to the *Pyramid Texts* (*PT* 659 (1866)) and as stated above bowmen were frequently employed in funeral rituals.

The spear

There is textual evidence, supporting the observation of McDermott (2004, 80) that the spear (both in metal and stone form) had ideological significance as a weapon of Horus (Reymond 1963, 1964, 1965).

4.4 THE EXOTIC, VALUE AND THE SUBLIME

A brief discussion on the problems of understanding the exotic value and the sublime is included in this chapter for two reasons. Firstly, I state several times that tool traits may suggest added value or that they may be associated with the exotic or sublime. The term 'the Other' was also used in a discussion of aesthetics. These terms are all interrelated. Secondly, rare items, or those associated with wealth, prestige, or sublimation are often assumed to have predilection for ritual use. If this could be proven it would give a shortcut to identifying ideological important tools. However, there are problems. Firstly, for past societies such as ancient Egypt, it is in fact difficult to disentangle the exotic, added value and prestige and notions of 'the Other'. Secondly, we need to be sure that rare exotic or prestigious items were indeed related to ritual. Both steps in this assumption may be fallacious.

The rare, the exotic and 'the Other'; definitions and identification

The desire to acquire scarce or exotic items seems 'natural' and widespread, thus commentators frequently do not attempt explanation (e.g. Goring-Morris and Belfer-Cohen 2001, 259–260). The exotic is usually equated with rank and prestige e.g. Shennan (1982); Gero (1989, 93, 97–99), though alternatives are sometimes cited. Taçon (1991, 194, 199) notes that stones from particular quarries in western Arnhem Land were sought for their mystical associations and cautions against the simple equation of rarity with prestige, because rarity is culturally dependent and may be socially manipulated.

The ancient Egyptian understanding of the rare and exotic is not fully understood. It has been suggested that lists of items inscribed in temples, many of which include items which are exotic by virtue of rarity, demonstrate the power of pharaoh, his ability to command exotic items as tribute, that his power encircles the world. Thus, the stela of Hor (reign of Sesostris I) reads: "To whom belongs what the sun-disk encircles, for whom the Eye has been brought with all its brilliance, specimens in all its shapes'' (Galán 1994, 74). Conceivably too, exoticism may be associated with 'the Other', and, by association, be transformational (suggested by the several depictions of exotic plants and animals on temple and sometimes tomb walls, especially in the New Kingdom). One might imagine that strange (i.e. exotic) items be associated with the otherness of the gods. Such sublime items may also heighten emotions. Alternatively, or additionally, the exotic may be associated with prestige. From a narrow functionalist viewpoint, increased energy costs resulting from acquiring the exotic may imply wealth (e.g. Richards 1992, 1995) and the related areas of prestige and rank (Gero 1989, 93). All implications need not be mutually exclusive, nor chronologically static.

Exotic and rare items are often equated with value by modern writers. As mentioned above, value may be added to artefacts through difficulty of acquisition. Added value may be obtained through increasing number of production stages or restricting access to items. Methods used to increase production costs may be interconnected with aesthetics, attention focussing devices, ideas of prestige, wealth and the exotic, and an increase in stylistic choice and thus, ultimately, the ability to represent metaphorically. Several writers see a link between increased production stages and increased social information (Malinowski 1961; Struever and Houart 1972; Rathje 1975; Hodder 1982b; Wiessner 1983; Sievert 1992, 8). The idea that style entailing a greater investment of time and energy is more likely to project symbolic[35] messages is also stressed by Hovers *et al.* (2003).

Various reasons are suggested as to why exoticism, added value items and wealth markers correlate with ritual. Wiessner (1985, 162–163) states that the exotic and items with added value are more often associated with iconic style, which, as explained in **Chapter 2**, is related to ritual. The sublime is also connected with ritual (**2.2.2.5**). Wiessner suggests that the exotic is used in iconic style because artefacts requiring more effort are likely to more aesthetically pleasing. The nature of aesthetics and its connection with ideology was discussed above. Renfrew (1985, 19) suggests

[35] It is thought that he would mean iconic and univocal metaphors.

that wealth investment (i.e. items which have added value) in equipment or offerings may mark ritual, because wealth marks the importance of ritual to the community. Investment of wealth or effort shows a person 'means it'. Perhaps wealth also suggests something unusual and sublime, the 'Other', all of which are connected with ritual (**2.2.2.5**). It may also relate to power, since wealth is dependent upon power. Added value could proclaim manufacturers' skill or the prestige of the owner, it may suggest that the artefact is somehow sublime, special.

Gero (1989, 94, 101–103) considers both degree of deliberate manipulation of raw materials, plus numbers of stages, and equates both with the quantity of social information an artefact might embody. 'Like rarity of raw material, technological complexity directly embodies and represents high energy expenditure and control over more production labor' (Gero 1989, 94). Gero firstly states that increased proliferation of production stages increases labour investment, and secondly, following Wilmesen (1974, 93), that 'the more a specimen is purposefully shaped, the greater will be the potential for social input and, consequently, the greater will be the choice for stylistic elements to be incorporated into that specimen's form.' She (1989) simply concludes that bifaces have more production phases than flake tools and assumes that these therefore conduct more social information. She does not attempt to prove the link. It is noticeable that for Egypt, bifaces are often those items which in the Early Dynastic show elaborating hafting and are particularly fragile. These areas, as shown in this chapter, are also associated with metaphor.

But we should examine if added value does relate to ritual and ideology more generally. Sievert (1999, 61–62) measured 'workmanship' as an indicator of tools used for ritual activity by the Maya. By 'workmanship' she meant 'how much time and care was invested in the tool' (see also Sievert 1994, 151). She (1999, 83–84, fig. 9.3, 98–99, fig. 10.7, 106) found that the greater number of tools in ritual and elite craft activity were 'fine' though there were also a high number of fair and crude examples.

There are several other ethnographic examples of items with few production stages used as 'ritual' tools. For example, pebbles and honey may be used in 'ritual' (Engelke 2004). For recent inhabitants of Irian Jaya province of Indonesia, stone is ideologically significant, despite technological simplicity (Hampton 1999, 202, 258).

The same applies for Egypt. Pinch (1993, 355) states of votive offerings to Hathor "There are degrees of quality, but it is the symbolic value of the votive offerings which seems to be the dominant factor". Bard (1988), in a study of object types found in Egyptian Predynastic graves, demonstrated that rare materials did not

necessarily correspond with what could be considered the richest graves. At New Kingdom Deir el-Medina (**map 7**) the 'wise woman' Madja and her husband were relatively wealthy; however, her apparently magical artefacts were not exotic, consisting of gazelle dung, shells, etc. (Meskell 1999). Even for New Kingdom royal tombs, rarity was not all important (Patch 1998, 36). Faience appears in elite graves because of its intrinsic symbolic/metaphoric value (Patch 1998). Texts show the magical significance of such materials as saliva (Ritner 1993, 74–88) and Amenhotep III had portrait heads of himself made in unbaked clay, possibly because of clay's association with creation (Kozloff and Bryan 1992, 254). The Ptolemaic temple of Dendera (**map 6**) contains a list of some 24 minerals presented during Khoiak (Mariette 1870 IV, pl. 36, col. 49–50; Mariette 1879 IV, pl. 39, col. 140–142; Cauville 1997 I, 19 and 27; Cauville *et al*. 1997 I, 34.3-4). This includes precious and semiprecious minerals, but also flint. This is not simply a reiterating of kingly prestige but can be interpreted as a list of materials of which the Egyptian cosmos was composed.

Cross-culturally the rare, exotic and sublime, and by association items with added value, are more often linked with ideology, but this does not exclude common items. However, even if we admit that exoticism and added value was significant in ideology in ancient Egypt, we need to know if flint tools had value of this kind. This cannot be decided by a simple examination of the material, particularly as value is often socially ascribed.

Was flint rare, exotic, or valuable?

The dominant Egyptological view is that flint was a poor person's substitute for metal (see for example Ikram 1995, 70). It is not clear which period Ikram is discussing, but her view appears to be the dominant one for Dynastic Egypt in general[36]. However, the equation of flint with poverty may be questioned.

Several Egyptologists have attempted to unravel ancient Egyptian ideas of value. Richards (1992, 109–119; 1997, 37–39) ranked Egyptian materials, firstly, according to 'effort expenditure', and secondly, by an 'Egyptian view' of expense. In her effort expenditure indices flint is ranked 10, on a scale of 1 to 19, making it equal to carnelian, one point above alabaster, and one point below faience. The analysis is

[36] That flint was only used after the Old Kingdom in religious ritual, and that was because of the lack of innovation associated with ritual, has a long history in Egyptology (e.g. Findlay 1894, 228-229; Reisner 1938, 154; Eggebrecht 1973, 115; Wilkinson 1992, 189).

qualitative. Richards' analysis does not take into account any manufacturing techniques applied to flint which might drastically increase 'effort expenditure' and it assumes falsely that all flint comes from the same source.

However, the real concern with the 'effort expenditure' approach is that, ultimately, value is socially ascribed. Access to raw materials and manufacture of tools may have been deliberately manipulated to artificially increase 'effort expenditure' and rarity. Value is not a simple property of the physicality of the object, and in fact, since almost anything can have value, one might argue that value is not even afforded by physicality, but rather depends upon two factors: how the material itself is considered and 'read' by users; the artefact biography (Renfrew 2004, 26–27), its social context. As shown in this thesis, **5.2.3**, certain flint tools and certain types of flint were restricted to particular socio-economic groups.

Richards (1992, 109–119; 2005, 110–111) therefore uses a second index of ascribed value, ascertaining an Egyptian view. In this flint is ranked as '5'. Richards states that this is based both on Harris' (1961) ranking of materials in Middle Kingdom texts and on a 'cautious treatment' (Richards 1992, 117) of Janssen's work (Janssen 1975) on monetary value for the Ramesside Period. Janssen (1975) does not give any monetary value to flint, and I know of no texts of any period which do. Janssen (1975, 324) does say that a *sft* knife was worth 3 deben (**glossary**), but it is unclear whether a flint or copper tool is intended. Similarly, he gives prices for spears and axes, but assumes them to be metal.

Richards states that the consistency with which items were listed in Middle Kingdom texts led Harris to believe listing was according to perceived value. However, Harris (1961, 11–13) actually states that his grouping deals with categorisation of materials, not necessarily their value. Nor does he restrict himself to a discussion of mortuary texts, or of Middle Kingdom texts, as I understand Richards to claim.

If, however, we assume that Harris is actually referring to value, it is apparent that flint is not consistently 'ranked' in texts, though some patterns of association are apparent. Flint is particularly associated with meteoric iron (**Chapter 6**). Flint also appears with *mnw* (quartzite) in an Abusir Papyrus (**6.7.1.3**); and on the Berlin amulet board an item of flint is substituted by quartz (Harris 1961, 138). It is also associated with *ḥmȝgt* (granite or amethyst) – Cauville 1997 translates *ḥmȝgt* as amethyst; Harris (1961, 118–120) translates it as garnet, 'though identification with sard or even resin is

not altogether impossible, and the problem cannot finally be solved'. At Dendera (Mariette 1870 IV, 39, col. 142) it is associated with *ṯḥnt* (faience) twice (Mariette 1870 IV, pl. 87; Cauville 1997 I, 123; Cauville *et al*. 1997 I, 234) and with gold (Chassinat 1935, 177).

Thus, flint is usually ranked with meteoric iron but also occurs with other substances. Richards gives gold an emic value of 13, quartzite 5, amethyst 5 and faience 7. Meteoric iron is not listed, though one would expect it to be at least equal to copper to which Richards gives an emic value of 9. Interestingly, Harris (1961, 24) equates the word *ʿ3t* with 'semi-precious stones' (that is in contrast with stone used as the more common building materials), a list of which is given in the Dendera tables (Mariette 1870 IV, 36, 49–50; 39, 140–142). Flint appears in both these lists. So flint appears alongside semiprecious stones and materials to which Richards ascribes emic values of between 5 and 13.

However, the association of flint with these materials need not mean that it has the same wealth value as them; grouping may be according to 'magical' worth, or, as I suggest with the link between flint and meteoric iron, grouping may be by metaphoric set.

Meskell (1999, 183–212) also ranked Egyptian artefacts, this time grave-goods for New Kingdom Deir el-Medina (**map 7**) based upon possible cost as adduced from literary sources and material evidence analysed by Janssen (1975) and Smith (1992), and through actual numbers of tomb goods. Unfortunately, the monetary cost of flint is unknown (it is not given by either Janssen, or Smith) so it is unclear why Meskell (1999, 195) has given it a value of 1 deben.

As is shown above, and in **Chapter 5**, quantities of flint occur in Early Dynastic to Early Old Kingdom elite tombs. Flint artefacts are also occasionally found in Middle–New Kingdom elite graves, despite the availability of metal alternatives. For example, as shown above, finely made flint arrowheads were found in tomb D29 at New Kingdom Abydos (**map 4**; **plate 57**) and amuletic flint artefacts were found in Tutankhamun's tomb. Unfortunately however, we do not have sufficient information from a wide variety of New Kingdom tombs to associated flint with any one socio-economic class. Certainly the large quantities of flint found on the settlement site of Memphis (Giddy 1999) do not suggest any strong restriction, at least for flint generally (but see **5.2.3**). Additionally, my own studies of material from New Kingdom Amarna

(**maps 3 and 5**) show that it was found in both rich and poor areas. All that can be said is that there is no evidence to suggest that flint was purely a poor person's metal.

4.5 CONCLUSIONS

Certain items and periods seem to be equated with artefacts which by their form appear to have ideological significance. These items appear to be imbued with physical traits that are difficult to explain except by recourse to the suggestion that their purpose is metaphoric.

The evidence seems particularly salient with colour significance and fire connections. The Early Dynastic Period in particular suggests ideological significance through artefact physicality, though in later periods evidence for the flint and fire association becomes particularly marked in text.

In the Early Dynastic Period bifaces, in the form of flint knives and bifacial arrowheads, are particularly apparent. In this period, these items were not infrequently made from difficult to acquire materials such as rock crystal. The use of rock crystal and pale coloured flint, plus use of polishing, suggests that luminosity and colour were important factors for this class of tool. Knives and flint bracelets for this period are particularly fragile. Knives show curation, suggesting a link with ideas of durability. Elaborate hafting of knives is also apparent in the Early Dynastic, and flint animals largely date to this period. It is noticeable that, throughout, most evidence comes from elite graves.

By the mid Old Kingdom most traits suggesting ideological importance are absent from the tools themselves. However, the connection between fire and flint comes to the fore in the textual evidence for later periods. By the New Kingdom we have evidence for amuletic flint knives in the Theban area, as well as selection and enhancement of natural flint nodules (the nodules to be discussed in **Chapter 5**), again suggesting ideology was connected with these items. The evidence of the fine bifacial weapons from Mirgissa (**maps 2 and 9**) may show that ideology still impacted upon the working and use of flint even in the New Kingdom. The evidence of the nodules from Thebes (**map 7**) and the material from Mirgissa show that ideology connected with flint was perhaps not totally confined to the elite.

It is obvious from this chapter that although the physicality of an artefact might suggest its ideological constructs, this cannot be understood except through using a holistic approach. Not only do we need to examine all sources of evidence but we need

to look at the wider social context of the material. The resultant picture is of a tangled web of ideologies and physicalities.

5. ARCHAEOLOGICAL EVIDENCE: FLINT CONTEXTUALISED

> *Second, material metaphors need to be understood temporally in their actional and biographical context….*
> Tilley (1999, 264)

5.1 INTRODUCTION

The metaphoric meaning of artefacts cannot be reduced to physical properties. Context is vital to understanding (Hodder 1986; 1992, 14) and sometimes considered more important than physicality (e.g. Jordan 2003, 20). Goring-Morris and Belfer-Cohen (2001) thus plead for contextual studies in exploring symbolic (their term) meaning of lithics. Context can both suggest places to search and can elucidate meaning. Context may be social (actional and biographical context in living societies) or archaeological (the relationship between artefacts, their traits and findspots).

Briefly, context is integral to understanding ideology of materials because:

- Certain contexts are assumed to be particularly ideologically apposite
- The way in which artefacts signify metaphorically relates to context
- An artefact cannot be properly understood if separated from archaeological or social context
- Understanding artefacts across contexts can elucidate meaning

As in **Chapter 4**, the search for metaphor and its meaning starts with an exploration of traits inexplicable in simple utilitarian terms. Possible metaphoric meanings which fit with both the immediate context and the wider social context are then considered. As in **Chapter 4**, it is again evident that a holistic approach is vital for meaningful explanation.

The message transmitted by artefacts is not only constrained and allowed by social context (as well as physical properties) but metaphorical messages may emerge as a result of particular contextual situations. To give a semi-hypothetical example; flint and fire may be connected because flint has the physical ability to produce sparks when struck, but unless flint is used within a context allowing this manifestation the metaphoric link might not emerge. Similarly, the initial unavoidable use of flint in

cattle butchery may, because of ritual conservatism, lead to the general association of flint with sacrifice and its use in execration rites.

Furthermore, metaphoric patterns may be mirrored between artefacts (Gosden 2005) and between social contexts (Hodder 1992, 24; **2.2.1.2**). For this to be meaningful we need to be sure that linkage between artefacts in different social contexts really relates to the same metaphor. For Egypt, where little detailed published contextual information exists, this is not easy, despite textual sources.

The main problem in studying the past lies in relating social context to archaeological context, whether for ideologically dense contexts or for 'profane' sites because:

(i) An object may move between utilitarian and ritual spheres (Whitehouse, R. 1996, 12) making final deposition only part of an artefact's biography, and one which may be atypical of its usual purpose. Final deposition tends to equate to burial rites, trash disposal, votives, or casual discard. Only in rare archaeological circumstances can we see the 'other' lives of objects. These include sudden site abandonment, accidental loss, manufacture or repair sites, or artefacts with related detailed iconographic or textual information.

(ii) Archaeological context rarely elucidates the wider social role. So, for example, a particular artefact type may be archaeologically votive, but why particular offerings were chosen is rarely clear.

(iii) Much social information is not available due to artefact decay or the lack of suitable media on which to it could be recorded.

(iv) Ideology may involve heightened emotion, and emotions are notoriously difficult to explain let alone recreate from archaeological contexts (**2.3.3.3**).

In this chapter two areas are considered:

- Ideologically dense contexts traditionally regarded as ritual
- Wider individual archaeological contexts including the 'profane'

I begin by considering ideological 'hotspots', sites commonly regarded as explicitly ritual, such as burial sites (**5.2**). These sites are those which have been more extensively excavated in Egyptology and so the majority of this chapter is given over to discussing them. Metaphor here is usually explicit, though there are problems. For example, artefacts found in such contexts are frequently assumed to be ritual despite

the fact that ritual sites also have profane uses: for example, Egyptian temples ran large estates.

It has sometimes been the practice to use explicit methodological tools for identifying these ideologically dense contexts. Renfrew (1985, 19–29; 1994, 51–52) lists archaeological indicators of ritual; 'behaviour correlates' (artefacts and associated actions) shared by ritual practitioners. The list includes evidence of a 'special place' where rituals were enacted, evidence of offerings, portable equipment and attention-focussing devices, investment of wealth in equipment and offerings, etc. Ruth Whitehouse (1996) defines six types of ritual objects which are recognized as much by archaeological context as by form. Neither is an entirely contextual methodology.

In the final section of this chapter (**5.3**), 'profane' (everyday or domestic) sites are explored; a potentially fruitful area but one which for various reasons remains difficult. As stated in **Chapter 2**, metaphor on such sites takes two forms, explicit or implicit. Whitehouse and Renfrew's lists show formalised ritual but do not include more everyday ideology. This means important sections of ideology are missing: gods which may be apparent in everyday life; and implicit cosmology which may not involve the transcendental, such as gender specific areas in settlement sites or the association of certain colours with particular technological activities.

For implicit cosmology we can employ contextual archaeology as posited by Hodder[37] (1986, 118–146; 1992, 14–15; Verhoeven 2002). That is, we can identify metaphor through artefacts or circumstances commonly linked in the archaeological record, through the contextual or relational aspects of artefacts in space, and from that infer a contextual or relational aspect in meaning. Objects create meaning not simply in their own right, but through juxtaposition (Tilley 1999, 265; Verhoeven 2002, 30). The metonymic or synecdochal significance of materials can potentially be extracted from the archaeological record through exploring common assemblages (Tarlow 1995, 126) whether the site is 'sacred' or 'profane'. Meaning across contexts may be sought in similar occurrences within different contexts.

The problem of applying such contextual archaeology approaches is that they require 'thick description' to have any validity (Hodder 1992, 15). This is not fully possible in this thesis because evidence is biased toward temple and tomb and contextual data is absent for early Egyptological excavations. There are further problems concerning the nature of metaphor on domestic sites and the mixing of

[37] Though for Hodder (1992, 14) context also includes artefact traits, an area which I have considered in Chapter 4.

messages. 'Ritual' involves performance (**2.2.1.1**), thus, traditionally ritual sites result from shared social meanings. While secular rituals abound, 'implicit' aspects of ideology may have conflicting and contested meanings, as here actors do not necessarily evoke performance, i.e. work in harmony. Additionally, domestic sites tend to deal more with the kinetically utilitarian than traditional 'ritual' sites.

While context is the starting point for this chapter, it is not the end. Information derived from artefact physicality and text is applied. Detailed understanding of Egyptian religion is difficult from archaeological context alone.

5.2 TRADITIONAL IDEOLOGICAL CONTEXTS

In archaeology, certain contexts are more obviously ideological than others, thus it makes sense to start with these. Not only the presence, but also the absence of certain artefacts in ideological 'hotspots' explains ideology. For example, after the Old Kingdom, flint weapons were rarely considered suitable grave-goods. However, their occasional occurrence in elite tombs and possible association with elites on settlement sites might suggest that unsuitability for burial was not predicated on the lower prestige of the material resulting from introduction of metal.

Four contexts are usually considered ideologically dense: shrines, temples, burials and special deposits; the latter being divisible into votive deposits, magic charms and sacred artefact deposits. These areas overlap and some artefacts may consistently occur in several areas, making them appear especially 'sacred'. I begin a consideration of context with the case of the flint knife, frequently categorized as ritual despite appearing on 'profane' sites.

5.2.1 RITUAL SITES AND SLAUGHTER KNIVES

It is sometimes assumed that flint bifacial knives are largely ritual (as I have found when discussing these with others), associated with ritual cattle slaughter[38] and therefore found predominantly on ritual sites, however, archaeological contextual evidence is inconclusive. Furthermore, it is only through a consideration of the wider evidence, iconography and text, that the metaphoric meaning of the flint knife may be glimpsed. It will be shown that bull sacrifice, a rite closely associated with burial (Otto 1960), was executed using flint until at least the Middle Kingdom. The choice of

[38] The word 'butchery' is often used instead of 'slaughter', however, it is the slaughter of the beast which is usually shown iconographically and which would be best suited to bifacial knives. Butchery is more likely to have been completed using expedient tools (Haskell Greenfield pers. comm.) as found at the Panhesy butchery site at Amarna (Graves-Brown 2009).

material was important, and I will argue that the act of sharpening was an essential part of this ritual.

Objects of a restricted geographical range tend to be iconic (**2.3.1.1**). This is the case with the bifacial knife. Furthermore, the physicality of many such knives also supports a ritual importance (**Chapter 4**). However, although the knife is traditionally associated with ritual cattle slaughter, actual contexts in which knives or knife fragments are found together with cattle remains are rare (Tillmann 1992, 197). At 1st Dynasty Helwan (**map 4**), a flint knife was found in a magazine among a layer of ox bones. Two other flint knives were found arranged in a cross-shape at the bottom of the structure (Saad 1951, 10–11, pl. 7–8). At Tell el-Farka (**map 4**) Early Dynastic cultic centre, a flint knife was found with several cattle ribs (Cialowic 2009, 86–87). Text was needed to identify an archaeological structure associated with knife fragments at the 5th Dynasty as the 'Shrine of the Knife' of Raneferet at Abusir (**map 4**; Vachala and Svoboda 1989; Svoboda 1993, 2006).

That flint knives were used more generally in ritual is supported contextually by their appearance on other sacred sites, particularly temples and tombs. Schmidt (1992, 87) claims that most flint knives are found on sacred sites. Miller (1985) believes stone knives found at New Kingdom Karnak (**map 7**) were used for temple slaughter, presumably by a simplified, possibly erroneous equation of temple=slaughter=flint knife.

It could be argued that the fact that most Early Dynastic flint knives are found in elite and royal burials (examples are given in **Appendix 1**) reflects the interests of excavators and is not a genuine ancient bias. However, Old Kingdom contexts include both domestic and ritual sites, for example:

(i) Elephantine temple and town (**map 8**), including a group in a natural rock fissure in a temple (Dreyer 1976);
(ii) Raneferef's mortuary complex around the slaughterhouse and stores at Abusir (**map 4**; Vachala and Svoboda 1989; Svoboda 1993, 193);
(iii) The Khentkaus pyramid complex at Abusir (**map 4**) in what may be a domestic context (which contained votive dishes) and around the stores (Svoboda 1993, 197);
(iv) Abydos (**map 4**) temple and town? (Petrie 1903b);
(v) The settlement at Giza (**map 4**; Kromer 1978; Conard 2000; Werschkun 2007a and b);

(vi) ‘Ayn-Asīl domestic sites (**map 3**; Midant-Reynes 1983; 1998);

(vii) Tell el Ibrahim Awad (**map 4**) town, temple and burial site (Schmidt 1992);

(viii) Bet Khallaf (**map 6**) elite cemetery (Garstang and Sethe 1902).

Interestingly, Svoboda (1993, 216) writes of the Abusir (**map 4**) lithics ‘The elaborate bifacial knives and their fragments come mostly from exactions [sic] in domestic storing and slaughtering areas of the Ranferef and Khenkaus mortuary temples; they are not found in the official parts (pillar courts)’.

Schmidt (1992, 87 footnote 4) argues that the character of the ‘settlement’ at Giza is unproven, and that the many bifacial knives found there could have been part of the temple inventory. Conversely, Kromer (1978, 30) categorizes those from Giza as profane even though the purpose of the Giza settlement seems to have been to build and perhaps serve mortuary monuments. However, the intra-site level of generally sacred sites may include ‘profane’ areas. More recent excavations at Giza (**map 4**) reveal flint knives distributed throughout the complex, even in bakeries and copper workshops (Werschkun 2007b, 251). ‘Domestic’ sites such as ‘Ayn-Asīl (**map 3**) also produce flint knives, though, as Midant-Reynes (1998, 44) states, there is a dramatic difference between the proportion of knives to other flint tools at this site (2%) and in comparison with that on ‘sacred’ sites; the temple site of Elephantine (**map 8**) has 14.3% and Giza artisans’ village has 21.5% of flint knives (Midant-Reynes 1998, 45). Tell el Ibrahim Awad (**map 4**), which included some religious structures, has 12% (Midant-Reynes 1998, 46).

It would be interesting to more closely compare the percentage of flint knives to other flint tools on sacred sites with purely profane sites, if such a differentiation could really be said to exist. Unfortunately there are few Old Kingdom settlement sites suitable for analysis. It could well be that lack of excavated settlement sites, as opposed to sacred sites, has simply biased the archaeological record, giving the impression that flint knives only occur on sacred sites.

By the Middle Kingdom, flint, excepting arrowheads, rarely occurs in burials (**5.2.4.5**). For Middle Kingdom Lahun/Kahun (**maps 4 and 5**), older excavation reports do not give percentages of tools and museum material is not necessarily representative of the excavated record. However, I examined 534 tools and fragments in British museums from Kahun, of which 158 were bifacial knives or knife fragments. This gives around 28.6% of the total flint as knives and knife fragments. Kahun, near modern el-Lahun, housed priests and lay people responsible for the cult of the dead

king. Thus, the site was neither purely sacred nor purely profane. Middle Kingdom Buhen (**map 9**), as a fort, would normally be considered a profane site, though war can also be 'ritual' (**Chapter 6**). In British museums collections, I found only one Buhen flint knife fragment, unfortunately from an unreliable context (Durham 1964.106; **Appendix 2**). However, spearheads are extant (Birmingham Museum 513.1965; **plate 54**; and others listed by Emery *et al.* 1979, 48) and one wonders if these may have been used in lieu of knives. As for recently published sites, Tillmann (1992, 140) found some 20 flint knife fragments in Middle Kingdom 'profane' Tell el-Dabʿa (**map 4**) section F1. This compared with a total of some 484 pieces (giving 4.13% knife fragments). For the New Kingdom, well excavated published sites are rare. Memphis (Giddy 1999) settlement certainly produced a number of bifacial knives. Interestingly I found no flint bifacial knives from Amarna (**map 3 and 5**), despite the fact that this site is partially sacred (discussed below). Thus, from the Middle Kingdom onwards, bifacial knives are more common on settlement sites, though other than burial sites, there are few well excavated sacred sites for comparison.

Tomb paintings provide more convincing evidence for ritual slaughter involving flint knives (reflected in heavy citation of such evidence in, for example, Needler 1956). Until the New Kingdom, flint knives featured in cattle butchery scenes, often associated with burial rites, decorating tomb walls, though most scenes date to the Old Kingdom (Eggebrecht 1973 gives extensive examples). Of course, one might argue that these knives are metal. This claim is made, for example, for the 5th Dynasty mastaba of Hetepka: 'sparks are seen falling from sharpened knives, indicating that they are of metal' (Martin 1979, 12). Martin makes no concession that 'sparks' may be flint spalls. However, it is more likely that until at least the Middle Kingdom the tool employed in slaughter scenes was flint for reasons now given.

From the 4th Dynasty the form of the knife does not usually suggest the material from which it was made (by this date metal knives had begun to copy flint forms). However, an 18th Dynasty depiction from the grave of Tetiky (Davies 1925, pl. 3, after Carnarvon *et al*. 1912, pl. 6) shows a knife with roughened texture resembling flint, rather than the smooth surface of metal (Eggebrecht 1973, 115). Such a depiction is, however, unique. More often one may identify the material from the hand in which the knife is held; in the left hand for resharpening, with the sharpening tool in the right hand for flint (the other way round for metal). This is because it is easier for a right-handed person to sharpen a flint knife using a retouching tool in their right hand. However, it is easier for a right-handed person to sharpen a metal knife

using a hone by holding the hone in the left hand and running the knife along it. Using this observation it can be seen that New Kingdom and later butchery scenes show metal knives (Graves-Brown 2008c). For example, the butchery scene in the temple of Hatshepsut, south hall of offering, (Naville and Clarke 1895–1908 IV, pl. 107)[39]; the sharpening scene from the tomb of Khaemwese (illustrated in Martin 1991, fig. 124); or the 25th–26th Dynasty tomb of Montuemhat (Graves-Brown 2008c, 41–43, fig. 2.3).

The problem with relying on iconography to indicate actual practice is: firstly, iconography represents ideal, not actual, practice; secondly, it is possible that the artist did not actually witness the event and so would not know if the knife was flint or metal. He could either be illustrating from profane, everyday practice or the imagined sacred.

We may wonder if Old and Middle Kingdom slaughter scenes, often called 'everyday life scenes', are copies of secular activities, or if they are important creational rituals? Cattle were status metaphors, not commonly eaten (Ikram 1995, 8). In many pre-industrial societies ritual marked the killing of such prestigious animals (Sherratt 1991, 62 note 7). The evidence that Egyptian slaughter was generally ritual appears strong. In Old Kingdom slaughter scenes, a lector priest is present (Routledge 2001, 147, Chart 3 no 60 and 61; Eyre 2002, 188–189), a person associated with *ỉr-ḫt*, which equates to 'ritual' (Routledge 2001, 102–103; **2.2.1.1**). In at least one instance this term is also applied to the slaughter act (Routledge 2001, 99). According to accompanying text (Kanawati and Hassan 1997 II, 44–47), the scenes represent provision of funerary offerings. Furthermore, funerals are ritual hotspots (**5.2.4**). But is the flint knife itself important to the 'ritual' and what is the nature of that ritual?

The knife-sharpening motif occurs from the 5th Dynasty and it has been suggested that it is inserted into the larger slaughter representation to hold scenes together and aid the plot (Eggebrecht 1973, 175). As a necessary prelude to killing, sharpening is an important, initiating task as well as a narrative aid. However, other scenes could have been chosen, for example the tethering of the beast. Evidently the sharpening act was itself important. Besides, there is further evidence that the knife was significant.

In the Giza tomb of Niwinetjer (**map 4**; Eyre 2002, 189; Junker 1951, 123, 127, fig. 45, 46) the recitation over the cattle slaughter is called  *sꜣḫt nm*

[39] Ikram (1995, 71) sees this as an instance of at least the ideology of the flint knife continuing based on the inclusion of the sharpener

'ritualising the blade(?)' (transliteration and translation by Eyre). However, Junker (1951, 123) transliterates this as *snm.t ȝḫ*, and translates 'Den Verklärten speisen lassen' (*transfiguring the food*), taking the emphasis off the blade. Either way this is a 'glorification spell', a means of achieving afterlife existence.

The question is: is the flintiness of the knife important? In the early Old Kingdom, metal would have been rare and flint-use unsurprising. However, by the later Old Kingdom, metal was common, at least in graves, and stone knives need frequent sharpening to be effective butchery tools (though see Ikram 1995, 67–69 who suggests flint knives need less sharpening than metal ones). Both suggest that use of flint was not a utilitarian choice, suggesting metaphoric importance. The purpose of the ritual is more difficult to define. Svoboda (2006, 509) suggests, without explanation, that the act of sharpening may have been metaphoric 'in the sense of "cleaning" the implement'.

As is shown below (**5.2.4.6**) there is debateable evidence that the manufacture of tools by the grave and incorporation of knife knapping debris into tombs was important in the Early Dynastic. Introduction of butchery scenes coincides with the custom of filling tomb magazines with large quantities of foodstuffs and furniture at the beginning of the 3rd Dynasty. But is this more than literal provisioning? Late Period butchery scenes are often credited with having more significance (Junker 1910), with the slaughtered beast representing the enemy of gods and kings, akin to execration rites. This may also be the subtle message of earlier examples, but the iconography may work on another level. Eyre (2002, 83) argues that butchery in the *Pyramid Texts* is a transformational metaphor. In **Chapter 6** further evidence for the creational and transformational properties of flint is explored.

The inclusion of sharpening motifs may additionally, or alternatively, be intended to display the butcher's skill[40]. Like the 'man of the house' sharpening the knife to carve the Christmas joint depicted on Victorian Christmas cards, it may also show the importance of the performer. A butcher's skill, whether as a 'ritualist' or, if such a thing exists, 'a purely secular individual' must have lain not only in killing abilities, but in knife sharpening. This latter act would have taken a certain amount of expertise, lest the knife break. The fact that the sharpening tool may symbolise[41] the butcher himself (Montet 1910, 45–46) emphasises the butcher's sharpening role.

[40] I here use the term butcher rather than slaughter as it seems a butcher would have killed and dismembered the animal.

[41] The sharpening tool acts as an iconic and univocal metaphor in textual contexts, thus is a 'symbol'.

However, that the butcher's skill is the only message conveyed by the flint knife seems unlikely given the evidence from the physicality of flint, deposition of flint knives in Early Dynastic-Old Kingdom burials, textual evidence (see **Chapter 6**) and special discard of debitage.

Knife sharpening debitage was found in a vessel in a sand floor of a room at 4th–6th Dynasty Hierakonpolis (**maps 2, 6 and 8**; Hoffman 1974, 46). This was not the normal means of rubbish disposal for this site and suggests the debitage was considered important. Elsewhere at Hierakonpolis inorganic 'rubbish' was either removed from non-elite living quarters and dumped in depressions, or, in the case of site abandonment, simply left. Cattle bones found nearby suggested this was a slaughter area, but remains included a near complete *Bos* skeleton suggesting sudden abandonment. The site was set in an industrial area. Perhaps deposition was simply the result of interrupted cleaning up. Ethnographic and archaeological studies tend to show that sedentary populations usually move discarded materials, especially dangerous ones, away from use sites (Murray 1980; Santley and Kneebone 1993). For Hierakonpolis elite structures, all rubbish was removed, except broken exotic items which may have been kept in storerooms. Ethnographic parallels suggest there may have been a reluctance to dispose of ritual items. Perhaps then the flint flakes were 'special' enough to be curated rather than casually discarded. I know of no other special disposal of flint flakes of this date.

Above I showed that flint knives also appear on secular sites. It should also be restated that wear patterns show flint was indeed used to cut-up meat, though use-wear of bifacial knives at Giza (**map 4**) shows that some bifacial knives were used as saws, perhaps for wood (Werschkun 2007b, 251). Evidently, not all bifacial knives were used in ritual cattle butchery.

In conclusion, tomb paintings, physical evidence and archaeology all suggest that sharpening flint knives was significant in the Old Kingdom, though the physical evidence of knives suggested they had ritual importance in the Early Dynastic–early Old Kingdom. The ritual importance of the flint knife is supported by later textual evidence (**Chapter 6**). At the same time, it is clear from find context and wear patterns that not all bifacial knives were used in rituals.

5.2.2 SPECIAL DEPOSITS

In **Chapter 4**, probable flint votives deposited at temple sites were mentioned. This section explores special deposits associated with execration rites at Middle Kingdom

Mirgissa and deposits of strange shaped flint nodules at New Kingdom Deir el-Medina (**map 7**). In both cases an understanding of social and geographical context is necessary in explanation and, moreover, textual information is eminently helpful.

5.2.2.1 A SKULL, A FLINT AND AN EXECRATION RITE?

Excavations adjacent to the 12th Dynasty Egyptian fort of Mirgissa, Nubia (**maps 2 and 9**) uncovered a human skull, minus jaw, atop a dish. In association were pottery sherds and figures of prisoners upon which execration texts were written. Adjacent to the skull was a simple flint blade[42]. The rest of the individual lay dismembered nearby. The deposit was published by Vila (1963, 1973). This was not the normal way of disposing of dead in either ancient Egypt or in Nubia and is clearly an execration rite and, more debatably, evidence of human sacrifice by flint knife. While the knife appears from the report to be a simple flint blade, and thus does not meet the criteria of over-elaboration discussed in **Chapter 4**, the context is clearly ritual. Evidence for execration derives from both texts written on the skull and the more traditional execration texts found nearby, inscribed on pottery and figures of prisoners (Vila 1963, fig. 9, 10). Usually, such texts are written on pottery jars or figures of prisoners which are then broken and buried, a metaphor for triumph over evil (Ritner 1993, 136–142; Muhlestein 2008).

The only other possible evidence of human sacrifice using a flint knife comes from the Early Dynastic labels of Djer from Saqqara (**map 4**), and of Aha from Abydos (**map 4**; Morris 2007; Piquette 2007, 38 with references). However, these scenes are difficult to interpret. Vikentiev (1950) even suggested that they might represent tracheotomy. Besides, given their early date, use of flint is unsurprising.

For Mirgissa, Vila (1963, 638) believes death may have been by strangulation and the flint blade used post mortem. However, Ritner (1993, 163 footnote 758) opines that extensive textual evidence describing flint in execration suggests that flint was actually used in human sacrifice at Mirgissa (this textual evidence is discussed in **Chapter 6**). Gillam (2005, 61) is of a similar opinion. It was suggested above that ritual butchery was perhaps, in part, an execration rite.

One might hypothesise that the much earlier broken bifacial knives, as described below (**5.2.4.9**), were also used in sacrifice. Like Maori jade axes gaining

[42] I have found no clear illustrations of the blade but that extant (Vila 1963, fig.6) suggests an unretouched blade of about 6cm long. It was certainly not a bifacial knife.

power through use in executions (Clark 1965), they had become powerful and needed to be broken before burial.

Archaeological evidence, then, supported by text, suggests an execration rite took place at Mirgissa. However, evidence for human sacrifice remains conjectural and, as only one archaeological example involving flint is known, we cannot say it was common (Fuscaldo 2003 discusses two other instances of execration rites involving possible human sacrifice but no flint is evident). The frequent use of flint against the enemies of Re as shown in texts suggests that, at least ideologically, flint was a suitable medium for magico-religious 'killings'.

5.2.2.2 VOTIVE DEPOSITS AND VOTARIES: STRANGE SHAPED NODULES FROM DEIR EL-MEDINA

Outside Egyptology connections between landscape and lithics have been explored (e.g. Saunders 2001). Within Egyptology Aufrère (1998) has discussed the relationship between prospector deities and Graeco-Roman towns well situated for mining, such as Dendera (**map 6**) and Edfu (**maps 2 and 8**), and in **Chapter 4** I have discussed flint and mountain links. In this section, the naturally strange shaped flint nodules of 19th – 20th Dynasty Deir el-Medina (**map 7**) are discussed within the context of a specific geographical and religious landscape, Thebes west. As these nodules are unknapped they might be considered irrelevant to knapped flint. While it is inconceivable that the Egyptians did not understand that these too were made from flint, and thus they should be considered in a complete study of the ideology of flint, perhaps we should not expect their ideological associations to be identical to that of knapped flint.

To modern eyes these flints often take the form of a spheroid resembling a planet within its belt, some joined, some forming concretions. Pitt Rivers (1882, 385) states that they 'cover the *débris* at the foot of the cliffs in such profusion that they are termed by the Arabs 'nuktah,' or drops which they suppose to have been rained from heaven'. While, the word 'nuktah' more accurately means a 'strange thing'[43], the fact that Pitt Rivers seems to have been told that these come from heaven is apposite, as will be shown.

The nodules are enhanced by black, brown and yellow paint to more closely imitate animals, deities and pregnant women, which relate to the specific landscape and social context in which they are found. A more detailed description of this research is given in Graves-Brown (2006b). In this thesis I only discuss the relationship

[43] Or so I am told by a modern Egyptian living in Luxor.

between landscape and flint nodules in terms of primeval qualities, connections with the celestial and with creation, areas which also seem apparent in knapped flint. Graves-Brown (2006b) also deals with themes of the feminine in rebirth and of emergence).

The eastern bank of Thebes (**map 7**) largely consists of the city and the temples of Luxor and Karnak. The western bank of Thebes was largely the site of mortuary temples and tombs of royalty and high officials from the Middle Kingdom onward. The area is hilly with limestone bearing flint. The central necrolis is overlooked by a large hill known as the Qurn (**glossary**). It is from this area that the nodules are found.

Utilised nodules are of two types: those embedded in stelae and those which are freestanding. Both are particular to New Kingdom Thebes west and tend to occur in village shrines (Bruyère 1930, 60; 1934, 69–70). More recently Reeves (2003, 2) excavated further examples from a workman's shelter. Others were found within houses together with other votive items such as stelae (Bruyère 1939, 276–277), usually in a front room containing a 'lit clos'. Rooms containing these structures at Deir el-Medina were loaded with ritual and sexual images and appear to have had a cultic function (Meskell 1999, 99–103). Thus, context in shrines or front rooms suggests a ritual function.

Those that are inserted in stelae are certainly votive, given the general votive nature of stelae, their archaeological context, and the descriptions thereon. Votive offerings tend to be used to mediate between worlds (Lévi-Strauss 1966, 225ff). What better items to fulfill this role than artefacts with a miraculous origin, not manufactured products of human hands?

A listing of pre-1986 publications concerning stone curiosities, can be found in Helck (1986, 1018–1019). These include: Bruyère (1930, 60; 1934, 69–70; 1939, 144, 276–7, 199-200); Keimer (1940). Two stelae are not included in Helck's list: Bankes Stela number 4 (Černý 1958); and Turin no. 50047 (Tosi and Roccatiti 1972, 80, no. 50047). Additional publications concerning these flints include Aufrère (1999, 76) and Reeves (2003).

Very recently (11/2009) 9 flint objects, 5 are in the shape of lunar disk within crescent (CK1026-1029, CK1199), one polished piece of indeterminate type (CK892) and three enhanced natural pebbles (CK1023-1025) have been published (Institut Français d'Archéologie Orientale and The Supreme Council of Egyptian Antiquities, 2009). These items come from the Karnak temple cache (**glossary**) excavated by

Legrain in 1903. Items from this cache date from the New Kingdom to the Ptolemaic Period.

A number of the freestanding nodules suggest armless, pregnant females. This form, with collar, heavy wig, and frequently female genitalia, appear to emerge from a lotus. Bruyère (1939, 144, pl. 45; Keimer 1940, 8–9) saw a parallel in the ancestor busts from Deir el-Medina. A closer parallel can be seen in certain amulets (Keimer 1940, 18–19). Unfortunately the illustrations are not clear enough to determine the object type. They may be heart scarabs (**glossary**). Ramesside heart scarabs are strikingly similar to the flint nodules, particularly an example from Gurob (**maps 3, 4 and 5**; UC27791, now in the Petrie Museum; Petrie, Griffith and Newberry 1890, 36, pl. 24.8). This is almost identical in shape and decoration to the flint nodules, but is made of blue glazed material with green inlay.

Other nodules are animal shaped, of which some are associated with deities: the hippopotamus inscribed *stḫ ꜥ3 pḥtj ršnj tw ỉmỉ pt n nṯrw nbw* 'Seth, great in strength, raging in the sky for all the gods' was found in a votive chapel (Bruyère 1934, 69–70, fig. 50; Keimer 1940, 11); and the crocodile with inward curved tail and lotus was discovered in a house (Bruyère 1939, 276–277, fig. 149; Keimer 1940, 12–14). The crocodile is of the same style as that on a Middle Kingdom paddle doll and on apotropaic wands (**glossary**; Keimer 1940, 13), probably representing Sobek. In a chapel with a stela dedicated to Thoth, a flint concretion taking a snake-like form was unearthed and interpreted as a probable offering to Meretseger (**glossary**; Bruyère 1930, 60, fig. 25; Keimer 1940, 15, pl. 9). Additionally there are: a male with beard (Keimer 1940, 7, fig. 1); a seated person with hand to mouth (Keimer 1940, 7, fig. 2); a horse or dog (Keimer 1940, 10, fig. 7); a bird (Keimer 1940, 12, fig. 9); and two winged scarabs (Keimer 1940, 16, fig.16 and fig. 17). Finally, at Deir el-Bahri (**map 7**), a mortuary temple site Werbrouck (1949) found a flint transformed into the head of a cobra.

Three examples of stelae with nodule inclusions are published. In all three, the flint is incorporated in the design and not an accidental inclusion. A stela with nodule in the shape of an *akhet*, or as Bruyère suggests, the full and crescent moon (Bruyère 1939, 199–200, pl. 23; Keimer 1940, 16–17, pl. 10), was found in the house of Penmenefer. The positioning of the uraeus (**glossary**) on the left suggests the moon, and the stela inscription begins *jꜥḥ-ꜥ3-ỉmy-rꜥ…*, 'the great moon which is in Re'. The moon, usually in the form of Thoth, was particularly revered at Deir el-Medina, occurring frequently on stelae from the locale (Sadek 1987, 111).

Bankes Stela number 4 (Černý 1958), now in Kingston Lacy, originally had a curiously shaped nodule cemented into its rounded top. The nodule itself has been lost but the Wilkinson notebook (cited in Černý 1958) shows that the stela originally contained a flint. Černý describes the flint shape as 'the solar disk'. Alternatively it could embody the full moon within a moon disk, as in Bankes Stela 6 from the same publication. Bankes Stela number 4 stela depicts a boat with scarab on the left and child on the prow on the left. The scarab possibly alludes to either the last hour of night, or morning, the scarab suggesting solar rebirth. A child sits on the boat bow suggesting the Night Boat (Assmann 1995, 49–50, footnote 63). The inscription is to Amun-Re the sun god, so the inclusion of the *akhet*, the morning sun rising above the horizon, would be most appropriate, though a moon metaphor cannot be ruled out.

Another stela of this type belonged to the scribe Ramose (Turin Museum no. 50047; Tosi and Roccatiti 1972, 80). It is dedicated to Thoth and depicts him in his ape form. The flint nodule is depicted atop an offering table mirroring Thoth's headdress of full moon atop a crescent.

A wider exploration of meanings behind such oddities may help explain those at Deir el-Medina. Odd shaped stones, including flints, fossils, meteoric iron and iron pyrites, were thought to originate in heaven and were called *bi3* (Wainwright 1932b; Roth 1993, 72). As Roth points out *bi3* can mean 'marvel, miracle', a categorization likely to have included the Deir el-Medina (**map 7**) nodules given the metonymic association in text between *bi3* and *ds* (flint), discussed in **Chapter 6**. *Bi3* is also associated with Hathor (Aufrère 1991 I, 103).

Texts show that minerals, including flint, have mountain connections (**4.2.6**) and that flint is linked with another primeval entity, the snake (Graves-Brown 2005, 58–59; and **Chapter 6**). Flint-snake-mountain forms a fuzzy set congruent with the serpent simulacra of western Thebes (Donohue 1992) and Gebel Barkal (**map 9**; Kendall 1988). Likewise, mountains and snakes are closely connected (Aufrère 1991 I, 21–22). The creational metaphor of the Theban mountains shows clearly in New Kingdom motifs of the Hathor cow emerging from the Theban hillside. The use of the mountains as a cemetery, their association with Meretseger, etc., results from, and enhances, their sacred nature. Flint from here would be particularly potent.

Text and iconography describe the primeval hill (connected with mountains) rising out of the primeval waters (Allen 2000, 126–127). It appears plausible that the Egyptians saw evidence for the primeval, creational waters in the area around Thebes. Several of the flint nodules of Thebes west take the appearance primeval forms

(Graves-Brown 2006b), others are fossilised sea shells. One is reminded of the Qurn of Thebes, and its likeness to the primeval mound emerging from the waters of chaos (Richards 1999, 88). Similarly, the lotus embellishments of the armless, pregnant female nodules (Bruyère 1939, 168–74; Keimer 1940, 7–9, pl.7) conjure images of emergence from primeval, watery beginnings. Like the famous wooden head of Tutankhamun arising from the lotus, these fertility-made-concrete nodules arise from the primeval Nun (**glossary**). The watery beginnings attributed to these nodules may enhance a connection between flint and the Inundation (**6.3.2.5**).

Fertility aspects are made more plausible by the possibility that the Egyptians believed minerals 'gave birth'. Certainly later Greek writers, notably Pliny (*Nat. Hist.* XXXVI.29) and Theophrastus (*On Stones*) considered that stones gave birth to other stones. Related to this, Éliade (1977, 29–30) and Halleux (1974) comment on the sexualization of minerals in antiquity.

In **Chapter 6** the solar, particularly the scarab form, and the lunar connections of flint, are discussed. In New Kingdom Western Thebes, as elsewhere, the sun as Re, was a paramount god. The solar significance of the flints is apparent through the image of Nut (**glossary**) pregnant with the sun-disk and the lotus, the scarab and the *akhet*, motifs of the nodules. Archaeologically, the protuberant nature of the nodules in the stelae recalls the scarab of New Kingdom and later pylon-shaped (**glossary**) pectorals. The depiction of emergence in 3D is particularly strong at this time. The deliberate inclusion of the nodule suggests that it is not just the protuberance that is important, but rather the material from which it is made. If only the shape were important this would be manufactured from the limestone matrix. It is the flintiness of the nodule within the matrix which is significant. The scarab is *khepri* 'who comes into being', a creature of birth, the sun-god in the morning. Studies of pylon pectorals suggest that the pectoral is a functional means of supporting the scarab, which emerges in the New Kingdom. At the same time, texts indicate that the pylon is replete with birth metaphor and can also represent the mountain (Finnestad 1998). Like the nodule in the Kingston Lacy stela, the pectoral scarab is frequently shown in a solar boat. While not denying a functional reason for the pectoral, one is tempted to see a link in the Egyptian psyche between emergent flint/scarab/stela from rock/pectoral/mountain.

Additionally, the shape of the round-topped stela is sometimes said to suggest the mound rising at the beginning of creation. If this were the case at Deir el-Medina, perhaps the round-topped stela mirrored the Qurn (**map 7**).

The night sky as an agent of renewal is manifest at Thebes through representations of Nut, and the motif of the celestial cow emerging from the mountains. At Deir el-Medina, the moon, as Thoth-moon (**glossary**), was held in particular esteem (Sadek 1987, 111). The lunar connection also relates to these nodules. The form of the flint nodules portrays possible lunar connections. Reeves (2003) states that those flints, where one semi-spherical nodule appears to cradle another, resemble stylised *akhets*, while Keimer (1940, 13 fig.14) envisions a solar disk between horns. However, is it not possible to see a moon disk in crescent, particularly as amuletic versions of these were popular in the New Kingdom[44]? Certainly, it appears from the Bruyère stela (1939, 199–200) and the Turin Museum stela that at least some of these flints were lunar metaphors. They could even be both solar and lunar. The Eye of Horus (moon) and Eye of Re (sun) were interchangeable in Egyptian minds (Darnell 1997, 35).

Textual evidence, though much of it later, links minerals with the moon. However, as early as the *Pyramid Texts*, Thoth carries the *mds* knife, a knife which can be understood in flinty terms (**2.3.2.3** and **Chapter 6**). Thoth is a lunar deity who carries Seth, who is also flinty (Graves-Brown 2005, 65 and **6.4.2**), and who could be considered lunar in a loose sense (Aufrère 1991, 36–37). Aufrère (1999; 2001, 159–60) outlines later textual evidence for Egyptian belief in minerals growing by moonlight and explores the lunar connections of curiosities in general. In relation to connections between Eye of Re goddesses and minerals, he notes that such goddesses tend to be associated with the moon, for example Isis and Tefnut (Aufrère 1999, 74). Flint too has lunar links and is closely connected with the Eye goddesses (Graves-Brown 2005, 62–64 and **6.2.2.3**). Finally, from later Dendera (**map 6**; Dendera X, 258, 11–12; Cauville *et al*. 1997 I, 138) comes a parallel between the sun and the moon, both of which are flint (written without the stone determinative) and shining gold (*ḥḏ mk m nbw*).

The Theban curiosities may well be connected with the Inundation. In the 2nd Century AD Carlsberg Papyri 5 (Smith 1998, 1078), the god in the full moon brings the Nile Inundation from the Primeval Ocean. These papyri also describe the Inundation as giving birth to minerals (Smith 2002, 116–117), though here again we are comparing 19th Dynasty artefacts with Roman Period texts.

[44] While the moon disk is not specific to the New Kingdom, its popularity is perhaps shown by common use in amulets, which one might think were worn by the populace.

In conclusion, I suggest that recognition of simulacra in flint nodules may even have influenced the siting of Thebes as a holy spot, enhancing the creational aura surrounding the mountain range. It is increasingly argued in material culture studies that physical properties of the environment influence the world-view (Jones 2004, 332). Use of these quasi-artefacts suggests it is more likely that it was the strange shape, rather than the material which was important. Nevertheless, as flint was widely used in ancient Egypt it would seem likely that this influenced the way flint was considered. Additionally, in western Thebes, flint used for manufacture of artefacts was mined as a by-product of tomb building (Seton-Karr 1904; Miller 1985, 229; Miller 1987) and tabular flint, as well as the unusual shaped nodules, are highly visible within tombs. This metonymic association with flint tool manufacture as a by-product of tomb building, a religiously important activity, may have led to an ideological connection between the two, the strange shapes reinforcing the sublimity of flint. As one might expect from a study of unknapped nodules, when compared to the metaphoric connections of knapped stone, some new metaphoric connections become apparent, notably that of the feminine and of emergent properties. There are similarities between knapped flint and these simulacra, namely their celestial, mountain and snake connections.

The study of the strange nodules of the Theban hillside illustrates the value of context and temporality in material culture for creation of metaphoric meaning.

5.2.3 TEMPLES AND ROYAL CENTRES

Whilst flint-working sites are difficult to identify, there is evidence that knapping was associated with royal centres and occasionally with sacred sites (sometimes a site is both sacred and royal). It is also clear that certain flint types were restricted in use. Although flint was ubiquitous as far south as Thebes (**map 7**; **Appendix 1, page 358**), it was still at times necessary to travel 40–100km to the nearest source. This could have been problematic for the majority sedentary population tied to particular occupations. In fact, text shows prospecting for minerals was largely limited to kings. Inscriptions, such as those at Wadi Hammamat (**map 3**), invoke the king as the prospector (a brief summary is found in Bard 1999, 869). See also this thesis (**Chapter 6, 157)** where the king, as the Eye, prospects for minerals.

Occasionally, sacred sites were chosen for knapping. For example: there are hints that occasionally mountain tops were chosen as knapping sites (**Chapter 4**) and at Meidum (**maps 3 and 4**) ‘razor blades’ seem to have been knapped close to or

actually within the tombs. Elsewhere, knapping of certain tool types was associated with royal centres and temples (Hikade 2004, 58). At Predynastic–Early Dynastic Hierakonpolis (**maps 2, 6 and 8**), bifacial knife manufacture was associated with temple areas (Holmes 1992).

It is not just manufacture but tool use which could be restricted. Flint from Old Kingdom Giza (**map 4**) falls into two types: locally available flint used to produce simple flake tools and the more scarce imported flint used to produce bifaces, triangular scrapers and blade and blade tools (Stevens and Hunt 2007). Flakes for 'quality tools' were particularly evident around royal administrative buildings and in areas where seals abound. The authors suggest that use of such tools was limited to workers of higher status or skill.

Miller (1987b, 144, 147), compares the typological poverty and the necessity of recycling old flint tools at the workmen's village at Amarna (**maps 3 and 5**) compared with the city of Amarna itself, a site replete with religious significance. While the workman's village was evidently short of the raw material, there is no evidence for this at Amarna city in extant collections from British museums, publications and recently excavated material seen by the author. Like Giza, this site is difficult to categorise. The whole of the city was imbued with religious significance and so it could be argued that the flint here is from an ideological setting. As at Giza, the link with royal administration may also be seen to imply a religious link given the status of kingship in ancient Egypt. At Amarna flint is found throughout the town, in both rich and poor areas, but concentrations of it suggest central control over these natural resources.

The connection between knapping and temples or royal centres may have arisen from administrative rather than any purely religious roles of such centres. Holmes (1992, 44) shows that for Hierakonpolis, only a small fraction of the assemblage could possibly have served as temple items. This highlights the difficulty of separating sacred from profane and sacred from high status. The question remains as to how restriction affected ideological use and perception; a question that cannot be fully answered. It is possible that rarity made certain items desirable or prestigious, enhancing association with 'the Other' and thus, perhaps, with the world of the gods (**4.4**).

5.2.4 GRAVE-GOODS

Graves-goods are traditionally considered ideologically dense. Ritual connections are demonstrated by their often non-utilitarian appearance and ethnographic evidence for

connections between ritual and burial. For Egypt this is reinforced by textual evidence that the Egyptians themselves categorised burial linked activities as 'ritual' (**2.2.1.1**). Pinch (2002, 445) states of Egyptian grave-goods 'Objects may be found in cemeteries because they were votive offerings for the dead, objects buried to utilize *heka* (magic) of the dead, or objects used to work magic against the dead. To a certain extent all grave goods can be seen as establishing a reciprocal arrangement between the living and the dead….' Burials are thus potentially vital in understanding ritual, but there are problems:

- Artefacts in burials are chosen for practical, ideological, social and emotional reasons, areas not mutually exclusive but difficult to untangle (Carr 1995 with references).
- How a person was buried may relate to the nature of their death, their ethnicity, class, gender, religion, age, status of their relatives, and a host of other factors.
- Whitehouse, R.D. (1996) states that artefacts found in graves are ritual, as there can be no practical need for them. However, while burials may not be utilitarian this does not mean that they all equate with ritual, it depends how one defines utility. For example, it could be argued that certain artefacts may be placed in graves because they are so closely connected to the deceased that there is an overwhelming need, and it is a need, not a fancy, to place the object in the grave with the deceased. This is an emotional need, however, and one might argue that such needs are not utilitarian at all. It is more difficult to argue that they are 'ritual'.

A simple correlation between treatment of individuals in life and treatment in death is usually assumed. However, in death other statuses such as gender or age may be reflected, the social order may be inverted, or funerary goods may reflect status of the living. As Gordon Childe long ago (1945) pointed out, funerals can be political activities associated with power grabbing on the part of the living and may be more about the status of those burying the deceased than the deceased themselves.

Grave-goods may not equate to a person's status in life. For example, tomb 102, a child's grave in the 1st Dynasty cemetery of Saqqara (**map 4**) contained adult's tools (Macramallah 1940, 45). Although this grave had been robbed, it is unlikely to have ever contained the skeleton of an adult because other graves in this cemetery contained only one body each (including those of children) and grave robbing for adult

bones only seems inexplicable. The much later burials of neonates at Deir el-Medina (**map 7**) also contained flint tools (**5.2.4.11**). In neither case would one expect such young children to need tools. Perhaps such items were gifts to the deceased from the living or were status markers. Or, perhaps it was considered that a deceased child would be an adult in the hereafter. In ancient Egypt, heirs buried the deceased, so it seems plausible that the role of burial was at least partly to mark the status of the living. Certain grave-goods may have served to highlight the identity of the living heirs, or may simply have been of no use to the living.

To give another example, Davis (1983) argues that, as tools are rare in Predynastic and Early Dynastic graves, when they occur in large numbers they probably indicate graves of craftsmen. He adds that copper items in graves of this period are rare, but where copper adzes and tools occur, so do flint knives. According to Davis, by the 1st Dynasty there are fewer flint tools in graves; however, at Saqqara richer graves occasionally contain flint tools. Wear analysis shows at least some of these were used in woodworking (Davis 1983, 129).

However, we must be cautious in assuming that tools really represent craftsmen. Tomb 3471 of King Djet for example, contained copper tools (Emery 1949, 19–20). Conversely, not all craftsmen had tools buried with them. Grave 117 at Abydos (**map 4**) belonged to the sculptor Hetep-neb, identified by his name followed by the knife determinative (Petrie 1925, pl. 1, no 117), and yet there were no flint or copper knives in his grave.

It is sometimes erroneously assumed that archaeologically available mortuary practice represents complete societies. However, the total numbers of burials excavated to date can only be a fraction of the original population (Butzer 1976, 76–80; Baines and Lacovara 2000). We do not know if the fraction excavated represents a cross-section of society and Baines (1983, 586) sees little evidence for cultural heterogeneity between classes before the Late Period.

In ancient Egypt, burial was formalised, traditional, invariable, rule governed and included sacral metaphor and performance (**2.2.1.1**). Routledge (2001) produced textual evidence suggesting that the Egyptians themselves considered burial related activities as ritual, though not necessarily the act of burial *per se*. However, it is not clear which particular funerary activities were *ỉr-ḫt* practices, excepting perhaps the "opening of the mouth" ceremony (Routledge 2001, 101–102).

There are clearly non-ritual artefacts found in graves, for example items discarded from grave manufacture, e.g. picks and hoes used in grave digging[45]. It can be difficult to differentiate deliberate and accidental inclusions. While certain tools may have been specifically manufactured for such a sacred task, it is possible that they are indistinguishable from those found on non-sacred sites. Additionally, while items placed in a grave are made ritual by their context, this does not mean they were not also used in profane circumstances. For example, 'razor blades' found in Early Dynastic graves may also have been used everyday as cosmetic items.

Post depositional factors introduce further problems, including differential decay of mortuary items and plunder. Finally, many excavations took place in the early years of the 20th century when recording was not to modern standards.

These problems will be demonstrated through examination of flint within selected excavated cemeteries. Following that, specific patterns found across sites will be discussed. The selected sites include: Hierakonpolis Fort Cemetery (Adams 1987); Hierakonpolis Locality 6 (Adams 2000); Saqqara (Macramallah 1940); and the mastaba tombs and accompanying subsidiary graves excavated by Emery (1954) at Saqqara. These have been chosen as they exhibit a range of social classes and reasonable numbers of flint artefacts. Such large, excavated and published cemeteries, and especially ones with flint, are rare after the Early Dynastic. The cemeteries will be examined following traditional methods of analysis – correlation of artefacts with gender, etc. Where distribution patterns are evident for flint, the evidence is ambiguous. Specific patterns across sites are then discussed in relation to traits which appear elsewhere in Egyptology, in other archaeological studies and in relation to ethnographic analogies. Contexts of blunt knives in relation to the "opening of the mouth" ceremony are explored, and traits such as wrapping of grave-goods, significant numbers etc., are evaluated.

5.2.4.1 HIERAKONPOLIS FORT

See maps 2, 6 and 8

Hierakonpolis lies in Upper Egypt, some 80km south of modern Luxor, near the village of Kom el-Ahmar. It is the largest pre and Early Dynastic site discovered to date, covering some 1.5km. The area includes settlements, temples and burial sites. In 1905, John Garstang excavated the Predynastic–Early Dynastic cemetery of

[45]Though when found in graves there is contention. Picks and hoes are similar in function. Nibbi (1978) explains the meaning of the hoe as a 'symbol' (her term) of foundation.

Hierakonpolis Fort. Adams (1987) later studied 166 of the 188 graves excavated and recorded. This is not a high status cemetery; the elite were buried at Locality 6 (Wilkinson 1996b, 83). The Hierakonpolis Fort itself is a large mud brick enclosure, whose use is largely unkown but is probably a funerary enclosure. There is no reason to assume any military function. The Fort is slightly later than the cemetery, being built by Khasekhemwy, the last king of the 2nd Dynasty. The cemetery can be dated to Naqada II–2nd Dynasty (see below).

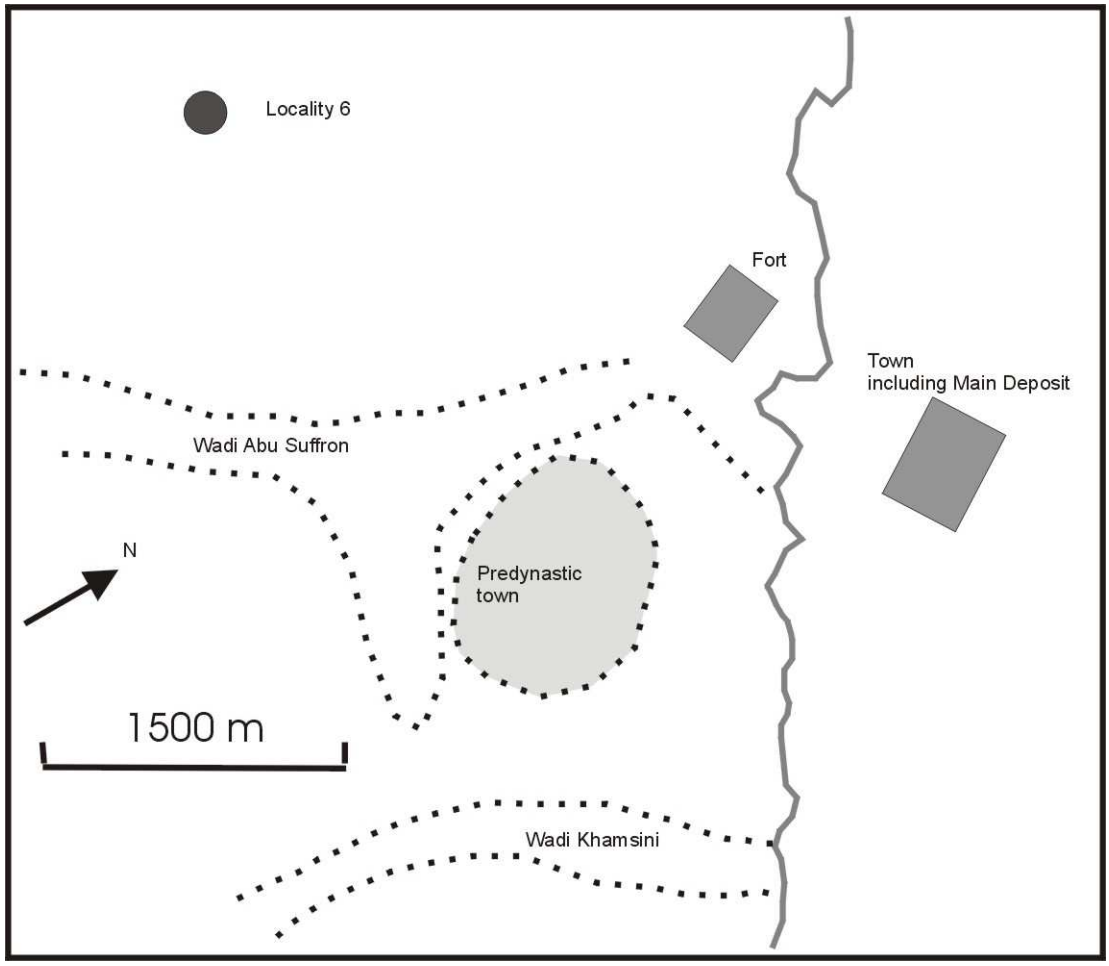


Figure 8. Map showing Hierakonpolis fort, locality 6 and the Main Deposit.

Adams (1987) produced a detailed publication, grave by grave, and statistical analyses showing that only 13 graves contained flints and that numbers decreased through time (Adams 1987, 184). Clearly, here, flint was not of primary importance. Stufe II (mid–late Predynastic/mid–late Naqada II) had 8 graves containing flint (22% of the total); Stufe III (Late Predynastic–Early Dynastic/Naqada III–Early Dynastic 2nd Dynasty) had 3 graves containing flint (0.3% of the total). 2 graves had flint but

were not dateable[46]. Hendrickx (1990) suggested revised dates for some 29 graves and Wilkinson (1996b) further examined the findings from this site, as well as other sites, using seriation to check Hendrickx' and Adams' dates. Only one of the graves of disputed date (H87) also contained flint tools. Adams' initial results in relation to flint can therefore be taken as reasonably accurate. As many skeletons were unsexed, it was not possible for me to check exact correlation of flint with gender, though flint was contained in both male and female (and children's) graves. It is not always simple to correlate gender with remains in modern excavations (Mann 1989; Morris 1992, 72–90), and in the past difficulties would have been greater.

Adams deduced the status of each grave by correlating size of grave with number of pottery vessels in each. There was some connection between the two. However, since there were so few graves containing flint, and since the correlation between grave size and status was not 100%, it would seem statistically invalid to try to match grave status to flint. Unfortunately, the types of flint tool placed in the graves are not specified, except that H90, a child's burial contained a 'fine flint knife'.

Interestingly, where positioning of flints within the grave is noted, a location near the head was preferred (this is also the case for 'razors' more generally, see **Appendix 1, 7.4.1**). In two cases, flints were placed in a shallow bowl (H6, H10), which, in one case, was placed in front of the head (H6) and, in the other, under the head (H10). In another instance flints were positioned near the right shoulder blade (H32), in two examples under the head (H35, H87), and in one case in front of the head (H155). It could be suggested that the head, being an important part of the body, gives 'status' to flint. Much later funerary texts describe the desirability of placing 'solar minerals' on the head of the deceased (Aufrère 1983, 10), which Aufrère equates with likening the head with the sun and the necessity of defeating the forces of evil before rebirth can begin. Flint is important for its shininess and equated with the solar (**4.3.1**; **6.2**), though it could equally be argued that the sharpness of flint provides protection against evil. An alternative explanation for flint near the head could be suggested. Podvin (2000) analysed Middle Kingdom grave-good positions. He ascribes grouping of artefacts to the practical as well as religious and shows that toiletry articles were often positioned near the head. However, we need to be aware of the dangers of comparing different periods in this way.

[46] The Stufe dating system based on Kaiser (1990) and Hendrickx (1993) is outlined in Wilkinson (1997, 12).

5.2.4.2 HIERAKOPOLIS LOCALITY 6

see maps 2, 6 and 8

Adams (2000) published the cemetery excavations of Locality 6 at Hierakonpolis, which had been excavated over a period of years, the most recent seasons being 1979–1985. This site dates from the Late Predynastic and perhaps continues into the Early Dynastic Period (Adams 2000, 179–182). The report covers some 10 tombs and their contents, plus one subsidiary burial. Although the cemetery falls just outside the date range for this study it is included here as it broadly overlaps in date with the nearby Hierakonpolis Fort Cemetery. It is generally agreed that Locality 6 contains elite tombs (see **figure 8** for location of both sites).

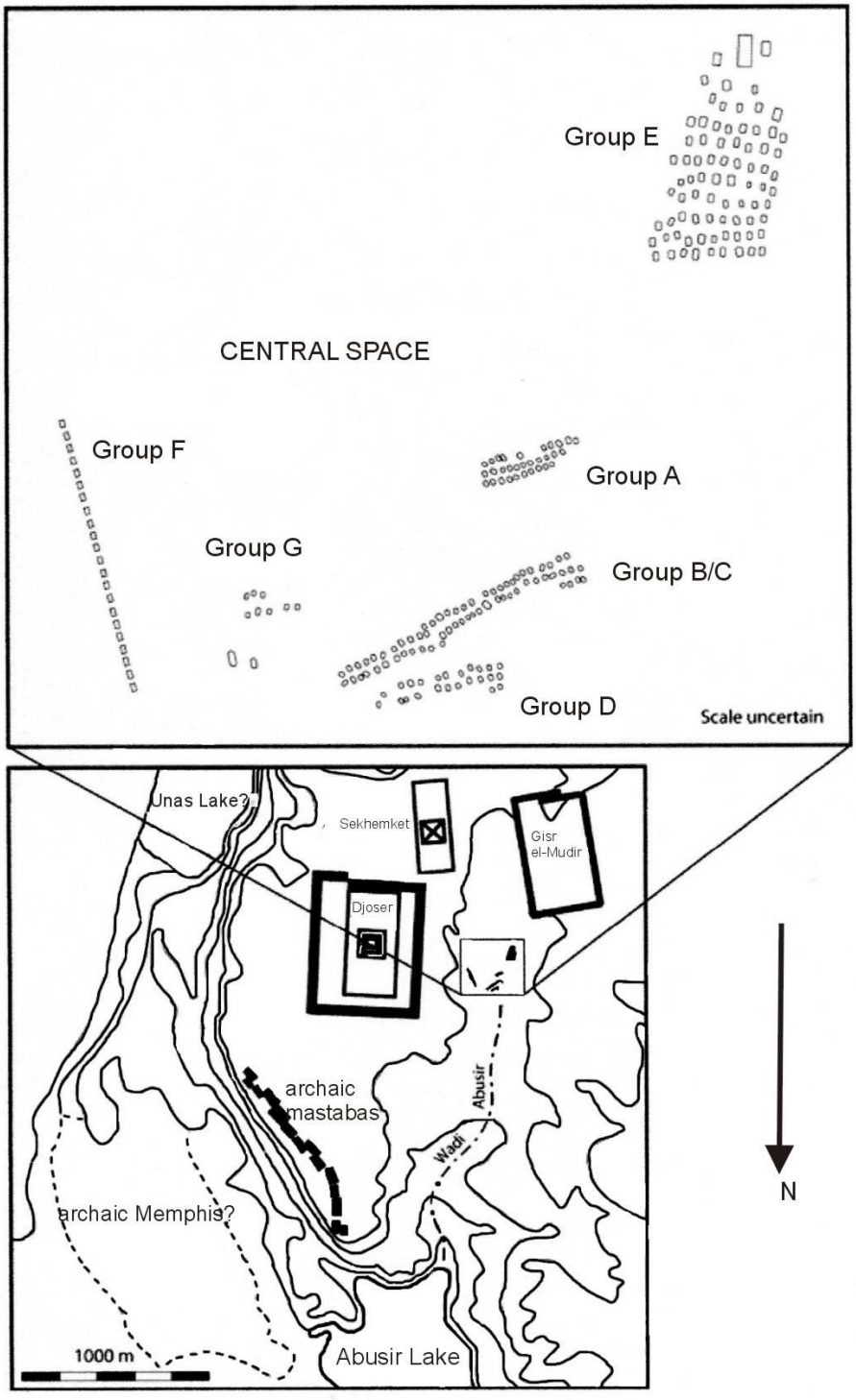
Robbing was problematic. Several fine late Predynastic knives found on the surface suggested that these had been taken from tombs (Adams 2000, 22). Nevertheless, it is clear from Adams' list of tombs, and artefacts therein, that a greater percentage of graves than those at the Fort still contained flint artefacts. There were 10 main tombs in all. 7 definitely contained human remains, of which 6 contained flint and 1 had flint in such close proximity to the tomb as to make it likely that the flint derived from the tomb. 2 others seem to have been graves of non-human animals with no flint and the other was mixed dog and human burial with no flint. This might suggest that flint was not a poor person's substitute for other materials. However, there were generally more artefact types in richer than in poorer graves and one would expect a rich person to have more utilitarian as well as prestige artefacts.

5.2.4.3 'MACRAMALLAH'S RECTANGLE'

see figure 9

The site of Saqqara is the principal necropolis for the city of Memphis, onetime capital of Egypt. It is situated in Lower Egypt, 17km from Giza (see **figure 9**). The group of tombs discussed here can be found north and north-west of the Serapeum and date to the Early Dynastic Period, probably Dynasty 1. There are six groups of rows of tombs around a central area. The groups were first published by Macramallah (1940), and later Kaiser (1985) produced a report hypothesising that the area was significant in the royal funerary cult, with the empty central area originally being used for the lying in state of the king's body. More recently, Morris (2007) re-examined the site and concluded that grouping of graves within the cemetery accords with social status. She used grave-goods to compare the status of each group. Macramallah, in the publication title (Macramallah 1940, Introduction), refers to the cemetery as 'de la classe

moyenne'. The grave-goods appear marginally 'richer' than the burials of Hierakonpolis Fort and the subsidiary burials of the mastabas excavated by Emery (1954). Quite whether one could classify them as 'middle class' is debateable. Morris (2007) makes a strong case for their occupants as sacrificed royal retainers.



Macramallah's Rectangle (after Morris 2007, 32, fig. 2.4).
Note that the archaic mastabas are those cited in **5.2.4.4**.

Figure 9. Map showing 'Macramallah's Rectangle'

Within the cemetery, 231 graves were arranged in six groups. Macramallah (1940) illustrates a number of blades, scrapers (including triangular scrapers and 'razor blades') and one concave backed knife. With the exception of the concave backed knife, which came from tomb 116 (Macramallah 1940, 18, 47, fig. 18), it is not clear which tool types come from which graves. Only numbers of tools are specified for each grave. These tend to be described generically as 'lames en silex', which, according to fig. 19 and fig. 27 include a number of round-ended 'razor blades' and pointed blades. Through an examination of the graves listed and the contents therein, the following may be deduced: 19 of the graves contained one or more flint artefacts (8.2% of the total). Written as a fraction of graves with flint over those with none, the results break down by group as follows:

9/22 were in group F (40% flint) (22/22 graves were plundered)
5/79 were in group E (6.3% flint) (75/79 graves were plundered)
2/31 were in group A (6.4 % flint) (10/31 graves were plundered)
3/65 from group B-C (4.6% flint) (11/65 graves were plundered)
The other groups had no flints.

Morris (2007) believes that Group E was highest in status as it had the largest and most deeply cut tombs, most of which had been plundered and at least one of which was a noble. Group F, was also a wealthy group, though not so wealthy as group E. Group F had the most flints by far (also noted by Kaiser 1985, 50). Unlike the other groups, which were arranged in two or more rows, this cluster consisted of only one row. All the graves in group F had been plundered, one was a child's grave. This group also contained the least number of stone vessels (Kaiser 1985, 50). I could see no other distinguishing features of this cluster.

Morris (2007) is of the opinion that flints in the cemetery tend to be associated with more wealthy tombs and that the single poorest grave group, group D, had no flints. As Morris further points out, similar assemblages to those at this site occur in other wealthy graves of the same period, where copper implements could have been afforded.

Of patterning by gender, 9 of the 19 graves with flints had definitely male skeletons, 1 was possibly male, 2 were definitely female, 2 were children, the rest were unknown. However, most of the graves were sexed as male, whether they were with or without grave-goods, as follows: 121 were sexed as male (with two males in one

grave), 4 possibly male, 18 were female, 3 possibly female, 13 were children, the rest were unknown. Thus, one cannot say that flint particularly correlates with gender.

5.2.4.4 FIRST DYNASTY SAQQARA MASTABAS AND SUBSIDIARY BURIALS

About a kilometeter from 'Macramallah's Rectangle', along the north eastern edge of the Saqqara plateau overlooking the ancient city of Memphis are a distinct group of 1st Dynasty mastaba tombs (see **figure 9** for location). At one point it was thought they could be the graves of kings. However, although some of these are grander than contemporary royal tombs at Abydos (**map 4**), they are now believed to belong to high officials rather than kings. The mastabas are surrounded by much smaller contemporary subsidiary burials which, with the exception of 3503, contained large quantities of flint as well as other goods (Emery 1949; 1954 II and III). Simultaneously, few subsidiary graves, even those containing copper items, had flint. Those few subsidiary graves with flint seem to have had significantly more goods than those without. While this might simply be a case of richer graves containing more of everything, the almost complete lack of flint in the subsidiary graves presents the possibility that flint equates with high status in burial, at least for this period and place.

Emery (1949 I) describes 4 very rich mastaba tombs containing flint (3471, 3036, 3038 and 3111) and poorer, though still large tombs, without (e.g. 3120 and 3338). Mastaba 3471 dates to the reign of king Djer and contained large quantities of copper tools and stone vessels as well as flint knives, 'razors' and other tools. This tomb was particularly large and elaborate. Similarly, 3036 contained several stone vessels, plus knives, 'razors' and triangular scrapers in flint. 3038, another major tomb, had several stone and pottery vessels and contained several flint blades. 3111 was a much smaller tomb than the others and has never been considered a royal burial, though it was still substantial and 'retained some semblance of its original arrangement' (Emery 1949 I, 96). The burial chamber contained several flint blades and triangular scrapers, ivory arrowheads, copper toilet implements and remains of an ox skeleton. A subsidiary burial had no flint implements, though did contain alabaster and pottery vessels. In this report it is clear that the richest tombs contain the flint artefacts.

Emery (1954 II) describes two large mastaba burials, (3504 and 3503). Smaller subsidiary burials, presumed to those of the servants of mastaba owners, surrounded both. Mastaba 3504 may possibly belong to Sekhemka-Sedj, a royal official. It was a

multi-roomed superstructure with magazines and an enclosure wall measuring c.56x25m. The mastaba contained numerous stone and pottery vessels, copper tools, gaming pieces and a several flint artefacts. The latter consisted of 21 bifacial knives, 191 triangular scrapers, 112 ‘razors’ and 327 other blade implements (Emery 1954 II, 66–68). An unspecified number of unworked flint nodules were also found.

Mastaba 3504 had 62 subsidiary burials, 58 of them plundered but still containing pottery. Subsidiary burials are small (approx 1x1.5m) comprising one grave pit containing a body plus a few burial goods. Only two contained flints. One was a female adult (3504-12) buried with vessels, 6 blades and 6 flint ‘razors’; another female adult (3504-19) was buried with 3 blades and 9 ‘razors’. There is some discrepancy between the lists given under the contents of the tombs and the illustrations and lists of the tombs. Subsidiary graves 10 and 12 seem to be confused.

Subsidiary grave 3504-12 (Emery 1954 II, 28–29) was intact and flints were placed in a group just below the pelvis of the body (the body was in a crouched position). The flints were placed within the coffin whilst 18 pottery jars were placed outside the coffin. 3504-19 (Emery 1954 II, 19–32) had been plundered but still contained two stone vessels and six pottery vessels. Both graves appeared to contain significantly more grave-goods than most other subsidiary burials, though of course most had also been plundered.

Interestingly, Morris (2007) draws a comparison between the subsidiary graves surrounding 3504 with Group F in ‘Macramallah’s Rectangle’, in that only the subsidiary graves on the east of the mastaba contained flints. The flints are of a similar type to those in Group F of ‘Macramalla’s Rectangle’. The fact that the tombs with the larger number of flints are spatially arranged in two cemeteries is in itself significant, though the nature of the significance is unclear. As Morris (2007) explains, the spatial positioning accords with the ancient Egyptian custom of arranging groups of people according to social status for ceremonies, as demonstrated in text and iconography.

Mastaba 3503, believed to be the tomb of queen Merneith, had 20 subsidiary graves (Emery 1954 II, 142–158), 13 of which were intact. None contained flint, but two (3503-J; 3503-T) contained copper artefacts. Morris (2007) points out that the group containing copper knives has similar grave-goods to Group F of ‘Macramallah’s Rectangle’ and moreover the group are in a similar spatial pattern in relation to the main mastaba as Group F. This may be significant given the link between the knife and flint (for example, in the name *ds*). Most contained pottery vessels. The mastaba itself contained no recorded flint artefacts but only pottery and stone vessels.

Emery (1954 III) describes 4 mastaba tombs. 3505 has only one subsidiary grave which had been plundered. 3506 had ten subsidiary graves, 4 of which are undisturbed, none of which had flint artefacts. 3507 had no subsidiary burials. 3500 had 4 subsidiary burials, two of which were undisturbed, none with flint.

All the mastaba themselves contained numbers of flint knives and triangular scrapers as well as razors and blades. If we consider types of flint tool, the Early Dynastic type-4 knife and the triangular scraper appear to be particularly associated with high status tombs. The knife in particular shows non-utilitarian traits (**Chapter 4**).

Thus, examination of flint within context reveals certain patterns. Flint does appear linked with wealthier graves and, where used, its form often suggests non-kinetic use. Flint is sometimes placed near the head. I now consider specific aspects of flint in burials.

5.2.4.5 SUITABLILITY FOR THE GRAVE

Was flint considered appropriate for the grave and were particular flint types thought suitable, or unsuitable? Firstly, there is slight evidence that not only was flint knapping centred on royal sites and temples but that it also centred on cemeteries. This is discussed below (**5.2.4.6**). Secondly, as discussed here, flint is particularly apparent in earlier period burials.

The superior quantity and quality of flint from tombs, compared with that from settlement sites, enhances the link between the grave and flint, at least for the Early Dynastic Period. Decreasing quantities of flint in graves does not correspond to decrease on settlement sites, where flint appears more constant. This suggests that, after the Early Dynastic Period, flint's importance in funerary ideology decreases. These changes may be a consequence of metal taking on some aspects of the ideology of flint.

As shown in **Chapter 4**, Early Dynastic flint in tombs is frequently kinetically useless. This situation ceases during the early Old Kingdom. Simultaneously, less flint appears in burials while it continues in settlements. Middle Kingdom cemetery sites, such as Abydos north (**map 4**), show that flint which does occur later in burials is usually either debitage or small blades (Richards 2005, 181–219). By the New Kingdom, flint in graves is largely limited to very occasional sickle blades and, in elite graves, to tranchet arrowheads.

The decline may be exemplified at Harageh (**map 4**; Engelbach and Gunn 1923), one of the best documented non-royal cemeteries (Richards 2005, 88). Though there are many more lithic items in British museums than in the tomb registers for the site[47], it is possible that these come from the dumps of town rubbish (Engelbach and Gunn 1923, 10–11), or the less wealthy tombs in the two wadis, not published in detail (Grajetzki 2003, 21). The Middle Kingdom graves, in particular, appear elite (Engelbach and Gunn 1923, 9; Grajetzki 2003). In the tomb lists (Engelbach and Gunn 1923, pl. 55–63) the following information is given: 47 pre and proto Dynastic graves are listed containing 7 flint artefacts (Engelbach and Gunn 1923, pl. 7), that is, about 15% of graves contained flint. Many of these were artefacts with 'added value' (**Chapter 4**). 57 Old Kingdom and First Intermediate graves are listed of which 4 (c.7%) contain flint. One piece was a knife. 279 Middle Kingdom graves are listed, of which 17 (c. 6%) contained flint. One example from 'tomb' 135 was said to be a knife, but it is very probable that this was not a burial as such (Engelbach and Gunn 1923, 11). None of the 59 New Kingdom graves contained flint. This pattern is not closely linked to the general decline of flint (**Chapter 3**). There is no evidence from skill levels shown in blades, nor from typological range, that flint working substantially declined from the Early Dynastic to the Old Kingdom.

While quantity of flint is reduced in burials it continues on settlements. This thesis (**3.3.2**) shows no general fall in quantities until the New Kingdom. At Giza town (**map 4**) there are large quantities of flint tools including bifacial knives (Werschkun 2007a, 158). The vast numbers of flint tools from Middle Kingdom Kahun (Lahnun) show that flint tools, including bifacial tools were not rare (**Appendix 2**). Common use of flint continues on New Kingdom settlements, e.g. at Memphis (Giddy 1999, 226–243), where it is among the most ubiquitous of materials and occurs in post New Kingdom levels. It is also apparent at Amarna (**maps 3 and 5**; Spurrell 1894, 37) and the Valley of the Kings (Carnarvon *et al.* 1912, 10). At the Third Intermediate Period settlement site of el-Ashmunein (**maps 3 and 5**; Spencer 1993, 15, 21, 33, 22, 23, 24, 27, 29, 30g, 30j, 30.l, pl.27) a fine bifacial knife and sickle blades were found. James Harrell (2006, information kindly supplied pers. comm.) has recently discovered a Ramesside flint quarry at Wadi Umm Nikhaybar in Wadi Araba (**map 1**) specialising in blade production. Finally, it has been shown that flint was commonly used for cutting hard stone until the 25th Dynasty (Devaux 2000; Stocks 2003).

[47] Additionally, Berman (1999, 182) states that the Cleveland Museum has some 88 flints from this site.

Nor can decline in flint in burials be attributed to a general decline in quantities of grave-goods. Percentages of flint in graves are given above and, as will be shown below (**5.3**), in the New Kingdom metal weapons appear in graves while flint weapons are confined to settlements. A real change in what was considered a suitable material for the grave had occurred.

There is also the question of whether or not certain tool types were particularly suitable funerary artefacts. Above, I explored the context of bifacial knives, at first more common on sacred sites, but after the Middle Kingdom mainly found on settlements. In the next section, two other types are examined: cores for 'razors' and pointed blades, and 'razor blades' themselves, which seem funerary related. Related to this, I note that in the Early Dynastic, and perhaps into the Old Kingdom, the few workshops that are known occur either on temple sites, such as Hierakonpolis or cemeteries.

5.2.4.6 GRAVE-SIDE MANUFACTURE

There is evidence, other than absence of particular tool types on settlement sites, that certain tools were made especially for funerary rites, or at least were manufactured near the grave. This may be related to the fact that flint technology is a reductive strategy (**Chapter 4**). Alternatively, one may see a purely utilitarian reason: flints were mined as a by-product of grave digging and hence were worked near graves.

Very few workshops are known for Egypt, but one appears associated with the Early Dynastic cemetery of Helwan I (**map 4**; Hikade 2005b). This employs imported material rather than local desert flint, which at least in this case goes against a utilitarian explanation. Capitan (1904, 708-712) describes flaking debris from bifacial knives and crested blades among the material from the Early Dynastic graves of Abydos (**map 4**; knife flakes were found within the tomb as described on page 711 though tomb robbing makes original deposition difficult to deduce). Unfortunately it is not clear if this is local or non-local flint.

While Hikade (2005–2007) claims no cores are known for 'razor blades', cores are known, but, like those for pointed blades, they are only ever found in graves. Again, unfortunately it is not clear if flint is local or imported. Old Kingdom pointed blades and 'razors' found in tombs can be refitted, suggesting they were made in or near the grave. Pointed blades, for example those found in the tomb wells at Meidum (**maps 3 and 4**; e.g. Ashmolean 1891.583; Ashmolean 1927.304), occur up to the 4th or 5th Dynasty. British Museum EA68780/1–2 consists of two blades from the same

core from 4th Dynasty Meidum, of which one is a straight-ended 'razor' (**plate 16.2**). L56.20.108 and L56.20.109 (**plate 16.1**) are two blades from Meidum in Liverpool City Museum from the tomb of Rahotep, of which one could be classed as a 'razor' (or alternatively a narrow bladed type). M2242 from 3rd Dynasty Meidum has 13 retouched blades and one unretouched (M2242/11; **plate 9.1**). The well of mastaba 8 at Meidum contained flints divided into groups, tied-up in cloths. With them were 4 alabaster pots laid on a rush mat. Other flints were placed at the mouth of the chamber. When put together, 17 pieces were shown to originate from one core, and in all two or three cores produced some 107 flints. The excavation report (Petrie 1892, 18, 34–35, pl. 29 nos. 20-21) illustrates both convex and straight-ended 'razors' among the group from the same core. However, the round-ended ones are quite long and thin so perhaps fall into the 'intermediate type' category (**Appendix 1, 7.4.5; plate 19**).

Thus, some blades appear to have been manufactured for the tomb. Other evidence supports 'ritual' use. The 'razor blade,' (**Appendix 1, 7.4.4; plates 17 and 18**) it has been said, occurs more often in graves than settlement sites (Schmidt 1992, 84–85). Midant-Reynes (1998, 44 footnote 66) agrees that these artefacts are primarily funerary. None are present at the settlement site of 'Ayn-Asīl (**map 3**). Kromer (1978), however, cites examples from the settlement at Giza (**map 4**), while Schmidt (1992, 87 footnote 4) points out the actual status of this site is uncertain. One should also consider that most excavated Egyptian sites are funerary. From a more recent excavation at Elephantine (**map 8**), 'razor blades' were found extensively on the settlement (Hikade 2005–2007). However, there are varying definitions of 'razor blades', and it is possible that those cited by Hikade are what I would define as 'intermediate types' (**Appendix 1, 7.4.9**). I await the full publication of the Elephantine site.

Other evidence supporting ritual use of 'razors' includes:

- Their sudden appearance in 1st Dynasty elite graves probably as cosmetic items. Cosmetic items are linked with ideology.
- The exceptional fineness and regularity with which many early examples are made suggests than competent specialist craftsmen.
- Lack of use wear while others were heavily used.

'Razors' first appear in large, wealthy 1st Dynasty graves with no obvious precedent (the Predynastic square type found at Hierakonpolis are similar but not identical to these, Friedman pers. comm.). This might associate them with the

revolutionary changes of this period, the growth of the state, rise of kingship, etc. However, it is possible that the Early Dynastic Period was a time of rapid population growth, which might also give rise to new forms. The fact that 'razors' occur in wealthy graves may suggest they express ideas of status.

As stated in **Appendix 1, 7.4.4**, the specific function of 'razors' is unclear. However, there is a strong case for at least some being cosmetic items. Schmidt (1992, 84–85) states that since they are usually found in graves, they are more likely to be cosmetic than craft items (craft items are rarely found in graves of this period). The metaphoric importance of cosmetic items such as Predynastic palettes (see Wilkinson 1999, 31 for references), and much later mirrors (Lilyquist 1979, 96-99), is well attested. Cosmetics were not merely beatification devices but were important in a religious sense (Manniche 1999).

'Razors' (**plates 17 and 18**) are not simple blades, rather their regularity of width (the blades are broad) and almost flat longitudinal cross-section means they require skill in manufacture. Angle height of the blade is miniscule, even immeasurable. They would not have required as much skill in manufacture as the fine ripple-flaked knives of the Predynastic, nevertheless they reflect more than mere competence. As stated in **Chapter 4**, such artefacts are more likely to be used to transmit social messages. However, not all examples are quite so fine, and it has been suggested that the 'fineness' of the blade depends on whether or not the item is found in a high status grave (Spencer 1980, 92).

The fact that a number of 'razors' appear unworn might indicate metaphoric rather than kinetic use, or alternatively, that unworn examples were those made for the graves while others had a more utilitarian function. Hester (1976, 350, fig. 4.a, b) illustrates worn 'razor blades' from Nag-ed-Dêr. Most worn examples showed wear on truncated ends indicating functional use as end-scrapers. Indeed, the attention paid to the invasive retouch of the ends suggests these were the 'business ends'. Additionally, many examples from the Fayum (**maps 1, 3, 4 and 5**) were 'too jagged and blunt to suggest razor blades' (Caton-Thompson 1934, 128).) Several examples from Tell Ibrahim Awad (**map 4**) showed secondary reuse with a heavily abraded basal edge (Schmidt 1992, 85). A few examples have lateral retouch, perhaps indicating secondary use. Hikade (2002, 311–313) notes lateral retouch on some examples from Elephantine (**map 8**). A round-ended 'razor' from the tomb of Djer at Abydos (**map 4**), has fine retouch along the lateral edge (Pitt Rivers 1901.40.10).

Knapping in or near tombs (above), with absence of evidence for knapping elsewhere, cannot be explained as simple provisioning of the dead. It is difficult to guess why these particular tool types ('razors', pointed blades and possibly knives) were chosen for such treatment. They may have been used to prepare the deceased for the afterlife, possibly placed in the grave because they were somehow unclean through association with death. One might guess that in earlier times flint was used for the ritual defleshing or dismemberment of the body and the placing of these items in graves may have been a reflection of earlier practice. Dismemberment is known from Early Dynastic graves (the debate between Petrie and Elliot Smith on dismemberment occurs in *Nature* 1910–1911; see also Peet 1914, 14; Hoffman 1980, 114–116; Spencer 1991, 39-43). Eyre (2002) discusses contemporary rituals of cooking and eating in the *Pyramid Texts*, rites related to dismemberment and seen as part of the rebirth process. Outside Egyptology, mortuary knives have led archaeologists to postulate defleshing. For example, despite lack of cut-marks on bones, use of blades in defleshing at the Middle Woodland site of Elizabeth was not ruled out (Odell 1994). The placing of blades from the same core within a grave seems to be a continuation from Predynastic Egypt, e.g. the Wadi Digla cemetery, Maadi (**map 4**; Rizkana and Seeher 1988, 20 footnote 25); it is not implausible that the idea of defleshing also continued. Alternatively, or additionally, as discussed below, archaeological grouping of blades from the same core may indicate concepts of fragmentation, ideas common to the Early Dynastic–Old Kingdom. They may even relate to creational aspects (discussed more fully in **6.7.1**).

I here largely leave aside the question of 'funerary palettes' (**Appendix 1, 6**), a polished form possibly related to the 'razor'. If these are indeed related to the polished 'razors' this gives further weight to the metaphoric significance of the unpolished forms. There is also the question of whether or not gold and copper 'razors' of similar form are functionally similar to the flint ones (**Appendix 1, 6**). The great variety within this group suggests they may encompass more than one function. Nevertheless, it seems undeniable that several were metaphorically important.

5.2.4.7 BLUNT KNIVES IN GRAVE CACHES

Otherwise rare and/or non-utilitarian artefacts grouped together are sometimes considered 'sacred caches'. When such grouping also appears in graves we have double the reason to suggest ritual purpose. Here I deal with blunt, polished knives found in caches in 18th Dynasty Theban graves.

Davis (1910 reprinted 2001, 38, pl.26.27) describes seven 'imitation knives', in limestone[48] 'placed at the disposal of the deceased for slaying and cutting up any animals that he might require for food' found in TT55. As described in **Chapter 4**, these knives are polished and blunt. They appear to come from a box in the burial chamber. Bell (1990, 103, fig. 5) suggests that some items from the box appear congruent with those used in the "opening of the mouth" ceremony (a ceremony used to reanimate statues, the deceased or even temples) including a *psš-kf,* the handle of a chisel, four alabaster blocks and two red pebbles (Bell does not include the knives). A number of faience amulets and small cups also appear to have been placed in the box. There is confusion in descriptions of findspots and it is possible that the contents described by Davis are inaccurate and conflated with the contents of another box found elsewhere in the tomb (Reeves 1981, 49; Bell 1990, 116–117). The whereabouts of the box itself is unknown (Bell 1990, 104), though it is described as "large cedar box painted red, with ebony veneer and gabled lid. One lid panel had in hieratic ink text: 'That which is in it [i.e. its contents]: golden offering vessels [literally 'for the offering table']." If the box did contain items for the "opening of the mouth" ceremony this suggests that not only the *psš-kf,* but other more standard shaped stone knives, could have been used in the ceremony.

Similar knives were found in the tomb of Tutankhamun in an ivory, ebony and red wood chest in the Antechamber (Murray *et al*. 1963, 32). These are described as flint. Other items from the box, though admittedly not all, could be ascribed to the "opening of the mouth" ceremony, notably the cloves of garlic, resin, ostrich feather, grapes, and incense balls and a number of miniature vessels (among which were what could be described as 2 dark and 2 light *ḥnt* cups). However, some instruments were missing from what might be considered a *psš-kf* set, though the Antechamber had already been ransacked by the time it was found (Carter 1972, 42, 59–60).

Finally, British Museum 5472 is a blunt knife inscribed with the title *sem*-priest and name of the High Priest of Ptah, Ptahmose (Hall 1931, 48, pl.7.1; Maystre 1992, 268). Typically, the *sem*-priest performed the "opening of the mouth ceremony" and this ceremony was associated with the god Ptah. Unfortunately context here does not help as this knife has no known provenance.

[48] Such knives are in some literature described as having flint inclusions (Bell 1990, 105). Even if it is admitted that they are limestone and not flint they are still significant here by way of being stone with flint inclusions and also because of their strong similarity to the flint examples found in the tomb of Tutankhamun.

5.2.4.8 SIGNIFICANT NUMBERS

Clusters of significant numbers of lithics has been briefly discussed outside of Egyptology (e.g. Goring-Morris and Belfer-Cohen 2001, 263 with further references). In the Predynastic cemetery of Abusir el-Meleq (**maps 4 and 5**) flint blades often occur in pairs (Bard 1999, 92). Some evidence for Early Dynastic pairing of knives exists (**table 15**). Here, published occurrences of the Early Dynastic type-4 knife (**Appendix 1, 9.1.2** and **plates 35 and 38**) are listed. Most other knife types are found singly. While the small sample and possible plundering muddies statistical validity, it does seem that, if not found alone, or in a magazine with several more knives, that this type is paired with another. I found only one instance of pairing of knives which does not include the type-4 – the 4th Dynasty pit deposit within a house at Elephantine (**map 8**; Kaiser *et al*. 1997, 140, pl. 18b).

Site	Place (t=tomb)	Status	Number of Knives	Published	Type of knife found in group
Helwan	t385, magazine, with ox bones	royal	2	Saad 1951, 10-11, pl. VII-VII	both type 4
Helwan	t385, magazine	royal	1	Saad 1951, 10-11, pl. VII-VII	type 4
Helwan	t579H5	royal	1	Saad 1951, pl.LXIIIb	type 4
Abydos	Khasekemwy	royal	2	Hikade 1997	both type 4
Saqqara	burial	royal	2	Emery 1958, III, 14	both type 4
Saqqara	burial	royal	2	Emery 1958, III, 51	both type 4
Saqqara	burial	royal	2	Emery 1958, III, 84	both type 4
Saqqara	t3504, sub room PP	royal	1	Emery 1958, II, 66	type 4
Saqqara	t3504, sub room QQ	royal	1	Emery 1958, II, 66	type 4
Saqqara	t3504, magazine V	royal	1	Emery 1958, II, 66	type 4
Saqqara	t3504, sub magazine W	royal	1	Emery 1958, II, 66	type 4
Saqqara	t3504, sub magazine DD	royal	1	Emery 1958, II, 66	type 4
Saqqara	t3504, magazine GG	royal	2	Emery 1958, II, 66	both type 4
Saqqara	t3504, magazine JJ	royal	3	Emery 1958, II, 66	all type 4
Saqqara	t3504 magazine BB	royal	1	Emery 1958, II, 68	type 2
	t3504 magazine HH	royal	2	Emery 1958, II, 68	both type 2
Saqqara	T3505 redeem above burial chamber	royal	1	Emery 1958, III, 14	type 4
Saqqara	T3505 west corridor	royal	1	Emery 1958, III, 14	type 4
Saqqara	T3506, burial chamber	royal	2	Emery 1958, III, 51	type 4
Saqqara	T3506, burial chamber	royal	5	Emery 1958, III, 51	type 2
Saqqara	T3507 burial chamber	royal	2	Emery 1958, III, 84	type 4
Elephantine	temple, votive deposit	temple	1	Dreyer *et al.* 1976, 87, fig 1c, fig 26, e; Dreyer 1986, 87, 136.351, fig. 45	type 4
Elephantine	House F	house	2	Kaiser et al. 1997, 140, pl. 18b	type 5
Bet Khallaf	Neter-Khet	noble	2	Garstang 1903 p18, pl. 15.	one type 4-5 and a type 6
Saqqara	t116	noble	1	Macramallah 1940, 18, 47, fig. 18	type 4
Saqqara	tHemaka, magazine AA, leather bag	noble	6	Emery 1938, 19	all type 4
Saqqara	tHemaka, magazine AA, with other flints	noble	1	Emery 1938, 19	type 4
Saqqara	tHemaka, magazine AA, with two pots		1	Emery 1938, 19	type 4
Naga-ed-Dêr	t1581	?noble	1	Reisner 1908, 38, 112, pl.40a	type 4
Saqqara	t3471	noble	2 plus frag)	Emery 1949, I, 63-64, fig.33	2 of type 4 plus frag of type 2

Table 15 : Clusters of significant numbers of knives

Unpublished examples from museums, for example M6773 and M6774 (**Appendix 2, plate 35**), found in the same tomb are not included in the above table. Excavated groups have tended to be split between museums, so that the inclusion of museum examples might not reflect excavated evidence. Additionally, the table only includes published excavations where contexts were not totally disturbed. Thus, the

debris of the superstructure from 1st Dynasty tombs at Saqqara (**map 4**), published in Emery (1958 II), included several knives which I did not add to the table. Also included above is a votive deposit rather than a burial.

There is also some evidence for pairing of blades:

Place	Status	Number of blades	Published	Type of blade found in group
G1225, mastaba	noble	1	Riesner, 1942, 405	intermediate
G1230	noble	2	Reisner 1942, 432	1 razor, 1 intermediate
G4240	noble	2	Reisner 1942, 466, fig. 282	1 broken intermediate, 1 knife handle
G4340	noble	2	Reisner 1942, fig. 285	2 intermediate
G4000	noble	1	Reisner 1942, fig. 287	intermediate
G4640	noble	2	Reisner 1942, 482, fig. 291	intermediate
G4630	noble	2	Reisner 1942, 492, fig. 299	intermediate (one broken)
G4620	noble	7	Reisner 1942, fig. 312	intermediate
G4720	noble	2	Reisner 1942, 511, fig. 314	1 razor, 1 intermediate
G4510	noble	1	Reisner, 1942, fig. 321	intermediate

Table 16 : Giza cemetery G (largely 5th Dynasty)

This pattern of paired knives in graves (and one example in a votive deposit), possibly extending to blades, need not surprise. We have two hands and knives are held in the hand. Additionally, duality is salient in Egyptian religion and art. There are later textual references to paired knives, for example, the 'Two Knives Lake', (**Chapter 6**). In *BD* 149d (Allen 1974, 143) a snake on a mountain is named 'Hurler of the Two Knives.' While these examples are not specifically flinty, Ptolemaic Papyrus Jumilhac XIII, 19 (Vandier 1962) describes Anubis (**glossary**) turning into a serpent with 'two knives of flint in his hands'. The Ptolemaic temple of Hibis in the El Kharga Oasis (**map 3**), shows a jackal called 'he who is over his flint knife' on a right door-jamb holding two knives (**Chapter 6**; Bull and Hall 1953, pl.10). This textual evidence is much later than archaeological pairing of flint knives. What it shows however, is the possibility that the idea of paired knives was ingrained in Egyptian ideology. Paired knives are possibly not found in graves after the Early Dynastic simply because it becomes less common to find any flint in graves. It is noticeable that two serpents, or

serpent staves are held in the hands of apotropaic deities (Ritner 2006, 213) which appears particularly significant given the link between snakes and flint.

5.2.4.9 RITUAL BREAKAGE

By the Dynastic Period, most flint knives from burials are found intact. However, several are found in contexts suggesting ritual breakage. A broken knife is still useable, so we must assume that if complete but broken knives are buried with all pieces together, it either means that breakage occurred immediately prior to burial, or that the knives were in some way special so that it was not considered 'proper' to reuse them. One could posit breakage to deter plunder, but in several cases, listed below, intact items were found with the knives.

The practice of breaking flint knives originates in the Predynastic Period. For example, broken knives, generally of elaborate types such as ripple-flaked examples, are found in numbers at Abusir el-Meleq (**maps 4 and 5**; Bard 1999, 92). Metal examples are also known (e.g. Randall-MacIver and Mace 1902, 40). This continues with less frequency into the Early Dynastic (Engelbach 1946, 202). Like Predynastic types, Dynastic broken examples are large and well made. Smaller knives displaying less skill are complete. Several broken examples occur in the late Predynastic–Early Dynastic cemetery of Naga-ed-Dêr. One knife from tomb 7491 was found in the right hand of an adult female and seems to have been broken near the centre (Lythgoe 1965, 310, fig. 138). Another biface, described as a 'spearhead' comes from tomb 7583 is also broken in half (Lythgoe 1965, 381–383, fig. 171c). The broken *psš-kf* listed in an Abusir Papyrus (**4.2.4** and **6.7.1.3**), is more likely the result of wear rather than a deliberate act. There is also a much later reference in *CT* 1021 to a broken *ds* knife, written without the stone determinative, though the text does not clarify the purpose of breakage (Buck 1935 VII, 242).

Broken knives also occur occasionally in temple deposits. An Early Dynastic deposit at Elephantine (**map 8**) contained a broken type-4 knife (Dreyer 1976, 87, fig.26e; Dreyer 1986, 87, 136.351, pl. 45) with other complete objects. This same knife appears to have been an heirloom (**4.2.4, page 121**). Finally, it seems probable that a number of Early Dynastic knives at Hierakonpolis (**maps 2, 6 and 8**) had hafts removed before burial (Whitehouse 2002, 431).

While several knives from 1st Dynasty graves are burnt (**Appendix 2**), this is probably due to the practice of burning tombs, usually attributed to thieves attempting to hide their deeds. Given that burning largely occurs in the 1st Dynasty, is not

confined to flint, and given the Egyptian aversion to burning bodies, it seems likely to have been a result of tomb robbing.

As suggested in **Chapter 4**, artefacts having gained power through being passed down through generations may need to be 'killed'. However, a consideration of cross-cultural contexts of breakage rituals suggests several other reasons for breakage. Sievert (1994, 151) includes intentional breakage prior to disposal as evidence of ceremony. But, drawing a 20th century western parallel with the idea that the unceremoniously used eggshell should always be broken before disposal (so that witches cannot use them as boats), breakage does not necessarily imply a public ceremonial act though it may imply metaphoric ideas.

Grinsell (1960) discusses ten reasons for ritually killing artefacts. These are: (i) to release the spirit of the object to accompany the deceased; (ii) rendering artefacts valueless to reduce risk of plunder; (iii) preventing quarrels regarding who should have the deceased's property; (iv) repugnance surrounding use of dead persons' belongings; (v) fear of pollution; (vi) to frighten away bad spirits; (vii) ideas concerning inappropriateness of using symbols[49] of authority (in the case of swords and scepters, for example); (viii) as an offering to the deceased; (ix) to symbolize destruction of enemies; (x) dismantling due to items being too large to go in graves. Chapman (2000, 23) gives five explanations as to why broken objects may be found in graves: (i) accidental breakage through use; (ii) burial because of breakage; (iii) ritually killing; (iv) breakage to disperse fertility throughout the settlement and beyond; (v) objects used in relations of enchainment are broken. Chapman (2000, 25–26) also discusses the possibility of breakage of fertility figurines to ensure their efficacy. This appears specific to Japan and no evidence supports such a notion for Egypt. He also considers reductive technologies and suggests division of flakes from a flint core between a number of persons so that 'the personal stamp of the knapper on the tool ensured that s/he would travel wherever the tool journeyed' (Chapman 2000, 40). Jordan (2003, 224) states that, for the Khanty, grave-goods are damaged so that the deceased would realise that they were dead. It would stop a confused or lonely dead person trying to get back to the living.

One might add other possibilities. For Egypt, knives may be 'killed' to travel with the deceased to the afterlife. Or, is breakage metaphoric of death itself, a message for the living? Knives may have been broken because they were considered dangerous. Danger could be heightened in the case of 'special' ceremonial knives. As Sievert

[49] I use the term 'symbol' here as such items are usually explicit and univocal, see **glossary**.

(1992, 20–21) points out for Maya material, artefacts used for rituals can gain power in two ways: firstly through being ceremonial objects, close to the sacred; secondly by acquiring potency through repeated use (Schele and Miller 1986, 43). Such artefacts, states Sievert, may be personified or given zoomorphic components and power released through ritual killing (Schele and Miller 1986, 179). The zoomorphic components of the ophidian flint knife are discussed in **Chapter 6**. It seems that it was often those knives which appear though their non-utile forms to be 'ritual' which are broken and not all knives were considered dangerous. Knife hieroglyphs, unlike other potentially dangerous hieroglyphs are not mutilated, and as we shall see in **Chapter 6**, text rarely suggests that the flint knife is a threat to the deceased. Model knives (e.g. Petrie 1920, 25) and small knives do not seem to have been deliberately damaged.

One may ask if the danger is to the living or dead. The 'killing' of representations of snakes and other potentially harmful hieroglyphs in Old Kingdom tombs is often said to function to protect the deceased from harm in the reanimation environment of the tomb. The temple too is reanimating. Several broken Egyptian knives were found in temples rather than tombs, so here breaking had nothing to do with protecting the dead, but possibly protecting the living.

While perhaps not exactly analogous to this, but continuing the discussion of breakage, deposition of flint blades from a single core, as discussed above, within a burial may suggest breakage was considered a prelude to rebirth.

A contextual study of breaking rites in ancient Egypt may illuminate why knives were destroyed. Deliberate fragmentation of flint tools within a funeral context appears consistent with other Egyptian fragmentation practices. These appear of two types. The earlier appear largely intent on ensuring an afterlife, the later seem largely concerned with destroying evil. The chronological variations are, however, fuzzy.

The idea of division and rejoining as a necessary prelude to rebirth is clearly shown in Egypt by the Osirian resurrection myth. Defleshing and dismemberment was discussed above. Other early 'dismemberment rites' may include the 4th–5th Dynasty 'reserve heads' (**glossary**). It has been suggested that such heads represent a ritual decapitation of the deceased, to ensure they do not harm the living, though alternative suggestions abound (Naville 1909; Vandersleyen 1977; Millet 1981; Lacovara 1997). The boats at the pyramids of Khufu are also ritually 'dismembered'. Lehner (1997, 119) suggests that this is because items associated with royal funerals were considered highly charged (the 'reserve heads' are not royal and not all the broken knives were from royal graves).

Dismemberment was a short-lived rite, as indeed was the rite of breaking stone knives. There are other rites of breaking, most significantly the funerary 'breaking of the red pots', which continue until much later. Execration rites are discussed above (**5.2.2.1**). Bows were ritually broken as part of funerary rites during the Middle Kingdom (McDermott 2004, 56–57). Ritner (1993, 148–153) discusses the magical and largely hostile nature of breaking in ancient Egypt, particularly from the New Kingdom onward which continues in text until the Graeco-Roman Period.

Burial may also be pertinent here as, like breakage, it could be a means of controlling artefacts (Ritner 1993, 172–180). Meillassoux (1968) has argued that special purpose objects may be buried because they are broken, or broken for burial. As Garfinkel (1994, 178–179) states, cult artefacts cannot be used in the everyday sphere and thus must, once they are broken, be ritually disposed of. I have already discussed the artefacts found in the hoards such as that at Hierakonpolis (**maps 2, 6 and 8**) in **Chapter 4**. A number of artefacts in the Hierakonpolis hoard were not broken; nevertheless, that these cultic items were carefully buried rather than reused suggests the Egyptians held to the principle of special disposal of sacred artefacts. However, other artefacts from the hoard were certainly destroyed (Whitehouse 2002, 432) and it has been suggested that these were emblems of authority called in from local chiefs (Whitehouse 2002, 432 footnote 34). There are also other much later hoards of redundant temple material which appear to have been specially disposed of, for example the Karnak Temple (**map 7**) cache discovered by George Legrain in 1903 and the more recently discovered Luxor (**maps 1, 3 and 7**) cache. So, then, items in graves may represent cultic items which require disposal in sacred places. Ritner (1993, 172–180) discusses the act of burial as a way of destroying power. Burial and breaking may thus have similar aims.

5.2.4.10 THE BODY

Above, positioning of items near the head is briefly discussed (**5.2.4.1**). Outside Egyptology, spatial patterning of grave-goods in relation to the body has been discussed. For Neolithic and Bronze Age Yorkshire, grouping of artefacts possibly emphasise points of bodily articulation such as the hip or knees (Lucas 1906, 103). Plausibly, metaphorically dividing the body in this way was a metaphor for kinship and affiliation grouping. This is situation could apply to Early Bronze Age Egypt.

5.2.4.11 WRAPPING AND GROUPING

Wrapping and grouping may be significant. In the magazines of the 1st Dynasty tomb of Hemaka Emery (1938, 18) reports 'One group in Magazine AA was found carefully packed in a leather bag, the large knives placed side by side with the cutting edge uppermost, and some of the small scrapers were neatly wrapped in strips of papyrus (fig. 4)'. Are these items wrapped to protect mourners or to protect the deceased, or simply to keep artefacts clean? Binding and enclosing are a magical acts (Ritner 1993, 142–144). Alternatively, wrapping and grouping may represent grouping according to donor or artefact categorisation. Wrapping may also indicate sanctity (Ikram and Dodson 1998, 153).

During the Pre and Early Dynastic, burials were not simply rites of passage, but a means of elite control (Bard 1992). Burial goods were used to legitimise and metaphorically represent, thus to reinforce social differentiation. This is the period when flint artefacts are salient in burials and a number, as shown in **Chapter 4**, exhibit traits which make them particularly conducive to transmitting social messages. We may therefore assume that many of these artefacts were part of the means by which the elite were able to establish their own positions. Links between royal residences and specialist flint working centres (**5.2.3**) and the development at this period of artefacts displaying high skill levels (**Chapter 4**) bears this out. Unfortunately, relative lack of text makes it difficult to understand specifics. However, the *Pyramid Texts* show a clear link between the knife form, or material, with the snake (see **Chapter 6**). The snake, in the form of the uraeus, is a well known metaphor for Egyptian kingly power.

The only recurring evidence for late use of flint in burials of which I am aware comes from the 19th Dynasty. Bruyère (1937, 12) noted that pot burials of neonates in the Deir el-Medina (**map 7**) Eastern Necropolis generally included flints, an unusual grave good for this date. It has been suggested that these were used in cutting umbilical cords (Meskell 1999, 170). However, Papyrus Berlin 15765 (date unclear) suggests that a reed should be used for cutting the umbilical cord (unpublished, information from Joachim Quack on EEF discussion list 22.3.2008). For an ethnographic parallel, flints found inside Romano-British cinerary urns, are, according to Leach (1972, 394), either explained as having been used by mourners to lacerate themselves, or, by the supposition that flint, like all fire producing stones, was thought to help prevent dead returning, thus were placed in urns. Though here, unlike Deir el-Medina, the burials are not newborns.

In conclusion, the placing of artefacts within the grave suggests ideological importance, because graves are replete with ritual significance. The types of artefacts, their positioning and numbers within the grave also frequently occur in ways which suggest a non-utilitarian purpose.

5.3 IDEOLOGICAL USE OF FLINT ON 'PROFANE' SITES

Traditionally, ideological studies exclude 'profane' (domestic or settlement) sites, though the importance of ideology on such sites is increasingly accepted (see **Chapter 2**). Studying ideological use of flint on non-sacred sites is particularly problematic as few have been excavated and those that have are not published with the detail which would be useful here. Even defining a 'profane' site is problematic since ideology could be said to permeate all aspects of life. Of course, within settlements, chapels and domestic shrines are sometimes recognizable (Renfrew 1985, 22) but implicit ideology (**2.2.2.6**; Bourdieu 1977, 114–116) is much harder to distinguish. However, the methodology of searching for non-kinetic traits can be used. Metaphoric meaning may then be sought from contextually probable metaphors, especially where they match metaphors apparent from other areas of Egyptian cosmology. Moreover a study of the wider context may well elucidate ideology. This includes a comparison of sacred and profane sites studied diachronically.

There are very few examples of what appear to be explicitly 'ritual' locations in domestic settlements. One possible exception is the 3 flint axes, 2 type-5 knives, 1 blade and one quartzite vessel found together in a 4th Dynasty ditch belonging to House F at Elephantine (**map 8**; Kaiser *et al*. 1997, 140, pl. 18.b). All the items appear unused and were skillfully made. It was suggested that the nearness to the temple might explain the fine workmanship of the pieces. Here I will concentrate on a more implicitly ritual example, that of the flint weaponry from Mirgissa. I use it as an example of the comparative study of flint on profane and sacred sites. This is one of the few 'profane' sites with large quantities published of flint.

Mirgissa is a late Middle Kingdom Egyptian fort site in Nubia (**maps 2 and 9**). As well as the execration rite discussed above, the site also produced a number of fine bifacial projectile points (Vila 1970). This may seem strange in that the weaponry in Egyptian graves, with the exception of arrowheads, was largely metalwork. I suggest that:

1. Flint weaponry from Mirgissa was undoubtedly of an established Egyptian tradition
2. A shortage of copper did not lead to flint use at Mirgissa. There are utilitarian reasons for its use and its absence from graves is probably due to ideological considerations.
3. The use of flint for weapons, here and elsewhere, nevertheless, also had an ideological component

These ideas are discussed more fully in Graves-Brown (in press).

5.3.1 THE EGYPTIAN TRADITION OF FLINT WEAPONRY

Since model soldiers in the tomb of Meseheti, 11th Dynasty Assiut (**maps 3 and 4**) are shown with metal spears (Saleh and Sourouzian 1987, pl. 73), it might be thought that soldiers in everyday life were commonly issued with such items. However, as Vila (1970, 192) points out, it would have been practically impossible to make such tiny items in stone. If we look at actual 'profane' contexts, flint seems a common choice for weapons.

As well as those published by Vila in 1970, javelin or spear-heads were found at Mirgissa away from the main armoury (Dunham and Janssen 1967, pl. 92 B and C; **plates 52 and 53**). Spear and arrowheads were also found at Buhen (**map 9**), in conjunction with late Middle Kingdom–Early New Kingdom pottery (Emery *et al*. 1979, 48). These include: Birmingham Museum 513.1965 (Emery *et al*. 1979, pl. 102, **plate 54**; Emery *et al*. 1979, pl.120, **plate 54**). Vila (1970), also reports other similar material from this site, then residing in Khartoum Museum. He cites comparable pieces from Semna (**map 9**) and Uronarti (**map 9**; Vila 1970, 193; Dunham and Janssen 1967, pl. 45a) also in Khartoum Museum. Illustrations in the Dunham and Janssen volume confirm his identification. At least one early New Kingdom lance-head was also found at Askut (**map 9**; Smith 2003, fig. 5.8). Other than military sites, two 18th Dynasty 'probably spearheads' were found at Kôm Rabîʿa (**maps 3 and 4**), Memphis (**map 4**; Giddy 1999, page 227, 233 no. 951/69 and no. 1066, 227, 234). These are described as crude and bifacial, which could imply unfinished or heavily sharpened items (they are not illustrated).

The practised skill exhibited in the Mirgissa pieces suggests established tradition, not a one off anomaly. The lithics exhibit the skill, regularity and standardisation consistent with a specialist and therefore a well established production

system. Specialism demands practice. Specialisms outside of weaponry are also evident in bifacial knives and arrowheads as late as the New Kingdom (**Appendix 1**).

Because most extant Egyptian weapons, excepting arrowheads, are made of metal, it might appear perverse to state that flint was commonly used (see **Appendix 1** for examples). However, while some metal weapons were certainly used in warfare, most known examples are funerary. As Pinch (2002, 446) states, no-one thinks of weapons as exclusively funerary, but their use in graves is not the same as that in everyday life. I am not claiming that weapons were made especially for the grave, rather, they have been selected for, from the wide choice of artefacts and materials. Secondly, graves from which objects are derived are those of the elite, rarely the common soldier. The two social groups may have had very different arms. I suggest that metal was considered particularly suited to the grave and secondly that the items placed in graves belonged to the individual rather than the collective military.

There are exceptions to the sacred context of metal weapons. I give two examples. The first is the Qantir arms factory, which produced daggers, and javelin-heads, probably dating to reign of Ramesses II (Pusch 1996, 135, fig. 133; Spalinger 2005, 227 has further references), thus slightly later than the Mirgissa material. Avaris (**map 4**) also produced metal arrowheads of copper or bronze (Tillmann 1994, 256; Bietak 1996, 12) though some at least may be Greek imports as the typology suggests a Late Helladic type (Bietak 1996, 12). However, the majority of New Kingdom metal weapons are from burial deposits. That metal was specifically selected for the grave is supported by the frequency with which large quantities of lithics are found on settlement sites compared with burial sites, especially after the Old Kingdom (**5.2.4.5**).

One might explain the continued use of flint arrowheads in graves but not weapons with a larger surface area as due to the fact that the larger surface area makes the material more visible. If ideology demanded a flashing, shiny surface for burial this would have been more apparent in spearheads than arrowheads.

Furthermore, personal weapons, such as daggers and perhaps axes, may enter the grave, while ‘military issue’, that is, non-personal property, would not. Personal weapons, one would imagine, were durable metal artefacts, as opposed to the short-lived flint weapons. Thus, artefacts placed in the grave may not reflect military issue. We might rather expect to find military weapons in suddenly abandoned forts or on battlefields. As flint is readily reshaped, one would not expect to see large pieces of the material other than in abruptly abandoned contexts. The large quantity of lithics at Mirgissa, compared with other Egyptian sites, could be explained as exceptional

circumstances. Except in Nubia, there are few large scale military buildings that have not been extensively reused, but have been extensively excavated. Only at sites such as Mirgissa would one expect to find caches of weapons.

It is sometimes argued that the Mirgissa flint is Nubian, however Nubian flint work is quite unlike the Mirgissa pieces. The flint industry is not pre-eminent in the Nubian Kerma culture (Bonnet 1990, 137), and fine, bifacial Nubian flint working of large pieces unknown. Occasional large bifacial pieces found in Nubia are considered imports from Egypt (e.g. Bonnet 1990, 137, 153, fig. 119). Nubian types consist of scrapers, sickle blades, microliths, borers, all with little core preparation (Gratien and Olive 1984; Säve-Söderbergh 1989, 122–125 fig. 41; Bonnet 1990, 137–139; Bracco and Gratien 2002). Perhaps the most beautifully executed Nubian bifacial pieces are the arrowheads. The raw material is largely grey pebbles, quartz, carnelian and agate and rarely flint (Bonnet 1990, 137; Bracco and Gratien 2002), while contemporary Egyptian forms are almost invariably flint. It appears likely that the material from Mirgissa is Theban, and the fine bifacial tools found at Askut (**map 9**) appear to be from the same source (Smith, S.T. pers.comm.).

5.3.2 FLINT, A PRACTICAL CHOICE

There are utilitarian reasons for the use of flint for arms[50]: (i) Flint is lighter than metal; (ii) Flint cuts better than metal; (iii) Flint is more fragile than metal. As late as the seventh century BC the Egyptian army preferred stone tipped arrows as they pierced contemporary armour (Forbes 1966 VII, 108). Flint is superior to metal for penetration (Pope 1962) because it is sharper. The serrated quality of bifacial tools further enhances cutting and their irregular surface might additionally encourage hemorrhaging. Modern hunters draw a file across metal arrowheads to produce the same effect (Edmonds and Thomas 1987, 193). For whale hunting, the Koryak used stone projectiles since rifle bullets simply stuck in the blubber without causing injury (Ellis 1997, 51).

Flint has a specific gravity of 2.65, copper 8.2, and bronze 7.4–7.9. Thus, flint is much lighter than New Kingdom metals. A bifacial arrow of flint weighs one gram and a comparable one in bronze of the same size weighs 6–16 grams (Tillmann 1986). This relative lightness can be either advantageous or disadvantageous. Heavier arrows are needed for penetrating armour, though lighter arrows will travel further. Since the arrow kills by bleeding rather than impact (Miller *et al*. 1986, 181), once the weapon

[50] These are not included in Chapter 4 as Chapter 4 discusses ideological properties of flint.

penetrates the flesh, one would not need a heavy arrow for increased impact wounds. Choice of weight also depends upon type of bow. An inefficient bow will reduce the distance an arrow can fly, but an efficient bow may cause a light arrow to be inaccurate and even snap (Blyth 1980). Thus, generally, light arrows are better with inefficient bows, heavy arrows with efficient bows. Therefore, it may be argued that use of metal for arrows may have been influenced by the post Middle Kingdom introduction of the composite bow. This does not however, take into account other lightweight materials such as bone, ivory and wood which were used as arrowheads. The weight advantages/disadvantages of flint over metal also apply to some extent to spears and lances. A heavier spear or lance may penetrate deeper but be heavier to carry and could not be thrown as far.

With respect to fragility;

> The completed spearhead is a really beautiful object with a needlepoint and wonderful symmetrical edges….Yet all this highly skilled labour is for one thrust of the spear!....The wonder is that such care is lavished on an article destined to have such a short life.
> (Love 1936, 75).

While it is sometimes stated that flint is not fragile, this assumption seems to rest on experimental archaeologists shooting into stationery meat rather than living, moving targets (Ellis 1997, 52). Weapon breakage would be particularly problematic during prolonged combat. However, the fragility of the material might even be considered advantageous in certain circumstances. A broken blade within a body will do more damage than a cleanly removed one.

One would assume that an expensive material would be the least advantageous. Since bronze was not commonly used for weapons until the later New Kingdom, only the price of copper in comparison with flint is relevant here. The problem is, that as discussed in **Chapter 4**, we do not know the value of flint, though it must be remembered that Mirgissa flint weapons would have probably been made from Theban material. Both the manufacture of copper and flint tools would require specialists. Evidence for copper working exists at Old Kingdom Buhen (**map 9**; Ogden 2000, 152). Copper/bronze working also took place at Middle–New Kingdom Askut (**map 9**; Smith 2003, 105). While it takes more time to make a single copper tool than a single flint tool, copper has the advantage that the artefact may be mass-produced in moulds.

This is not the case for flint. Thus, we cannot know if flint or metal was the more expensive at Mirgissa.

It could be argued that use of flint weapons at Mirgissa was only feasible because of Nubia's backward technology. The implication is that the Egyptians considered flint an inferior medium. Metal's rarity in Nubia might be explained as an effect of reserving it for use against more 'advanced' metal-using cultures. This idea is posited in Tillmann's excellent work (Tillmann 1992, 212–213; 1998, 265). However, while the Egyptians would have employed different tactics against the Nubians than the enemies in the north and east, the argument that primitive Nubians were easy to put down with 'inferior' weapons can be overplayed. It was perhaps not so much that the south was easier to conquer, nor that flint was inferior, but rather that flint was the best material for the job in the particular circumstance.

First, on the question of the metal shortage, there is little real evidence for this, though absence of evidence is not evidence of absence. Both archaeological and textual evidence show that vast quantities of copper and tin were imported into Egypt (Smith 2003, 71–73), though of course we do not know if this met demand. The price of copper may indicate its rarity value. While slightly later than Mirgissa, in Ramesside Egypt a bronze (or copper) spear sent to a coppersmith was worth 1 ½ to 2 deben (Janssen 1975a, 326). For comparison, a bundle of vegetables ½ to 1 deben (Janssen 1975, 527). An ordinary workman would get about 11 deben each month (Janssen 1975a, 534). So copper was not cheap but was it rare? Copper was used for mirrors, statuettes and other luxury items; it is certainly not uncommon in New Kingdom tombs, but perhaps such luxuries were considered more important than arms. Copper may have been more scarce in the outposts of Nubia. However, Smith (2003, 105, fig.5.9) shows metal artefacts becoming increasingly common during the Second Intermediate Period at Askut (**map 9**) and dominating the assemblage by the New Kingdom. Nor were these tools simply weapons. This does not suggest a shortage of the material. It simply does not make sense to use metal for non-military items on a large scale if metal was in short supply and metal weapons were superior.

Yet, it is not perhaps so much copper that was critical but tin for bronze. Sources of tin would have been north of Egypt, and hence may have been difficult for Nubian outposts to acquire. However, the evidence for regular use of bronze in Egypt is not apparent until the Ramesside Period (Ogden 2000, 153, 171), the same time as flint weapons decline. Thus, at the time of the Mirgissa hoard, the argument that a shortage of copper or bronze supplies led to reliance on flint in Nubia is debatable.

We may also question the idea of Nubia's technologically primitive weapons. Spalinger (2005, 62) suggests that the Nubians were at a disadvantage compared to the Egyptians because at the time of Tuthmosis I the Nubians lacked bronze. However, as stated above, bronze was not in regular use in Egypt until later. Daggers and razors were made of copper alloy in the Kerma Classic Period (Second Intermediate Period–Early New Kingdom), e.g. at Kerma (Bonnet 2004, 86). In fact, the copper alloy dagger is standard in Middle–Classic Kerma burials and the short copper alloy sword is famous in Classic Kerma burials (O'Connor 1993, 30–31). The British Museum, for example, has two Classic Kerma daggers, one of which has arsenical copper, the other is of tin bronze (Davies 1991, 316, pl. 13.2). Of course, we cannot be sure of the quantities available to the Nubians, compared to the Egyptians.

We may also question the claim that Nubians were easier to put down than the enemies of the north-east. Why use Nubian mercenaries unless they had a reputation for being good fighters, and why build forts unless there was a problem? However, this does not mean that tactics and weapons differed between Nubia and the north-eastern frontier. Chariots would have necessitated the use of a longer range weapon like the composite bow; as the Nubians did not use chariots, the composite bow was not so vital. As stated above, while flint arrowheads were possible with the composite bow, the new technology made the use of heavy metal tips more efficient.

Thus, I conclude that, while we cannot prove that copper or tin was not in short supply and rationed for use against the more threatening enemies of the north-east, little evidence supports this view. Flint weapons were commonly used in the early New Kingdom, and possibly do not appear in graves for ideological reasons. Furthermore, one might even suggest that they are used as weapons because of their ideological importance.

5.3.3 THE IDEOLOGICAL USE OF FLINT IN WARFARE

Flint's practical efficiency in killing has led to the myth in 'modern' societies, that flint is "naturally poisoned" (Ellis 1997, 47). Technological choice is not dependent solely on functional superiority, nor upon effort expenditure. Throughout history weapon development has been guided by ideology, including such unlikely or seemingly illogical areas as aesthetics (van Creveld 1989, 75–76). Therefore, the notion that flint or metal was functionally superior may not even be relevant!

The ideological importance of the flint weapons at Mirgissa is suggested by their over elaboration (one would imagine wood would have been as efficient, cheaper

to make, and less prone to damage). Other indications of ideology surrounding both weapons and flint in Egypt support this.

In fact, the existence of the fragile, bifacial tool, as opposed to an equally efficient but more crudely made weapon, in itself argues an ideological element. The effort expended in manufacture does not make sense in the light of the likely utilitarian return. Organic points are significantly more robust when used in the same way. Bamforth (1993) shows that acceptance of apparently technologically superior metal tools by Native Americans was conditioned by metaphoric considerations. Historical and ethnographic research clearly shows that weapons are subject to the same strictures (van Creveld 1989, 67–78). Spears in contemporary Africa are not only practical weapons, they are also markers of age, ethnicity and social status (Larick 1986).

Egyptian weapons were unlikely to be exempt from such considerations. The ideological significance of warfare itself, and the subjugation of Nubia, is demonstrated by smiting scenes on Pharaonic religious artifacts (see also **6.7.2**). There are indications that weapons in general had ideological import. For the ideological significance of arrows see Brunner-Traut (1956) and McDermott (2004), for spears see Reymond (1963, 1964, and 1965) and McDermott (2004). As we will see in **Chapter 6**, flint was the weapon of Re, a perfect choice to put down those threatening Egypt and to restore maat (**glossary**).

5.4 CONCLUSIONS

This section shows that contextual information is valuable, but used alone is inconclusive in explaining flint's ideological significance. As regards flint in execration rites, textual information is particularly useful in showing that flint was considered ideal for such rites and the contextual information from Mirgissa shows that in at least one instance reality matched ideology. At Deir el-Medina (**map 7**) a comparison between treatment of naturally shaped flint nodules and their wider landscape and ritual context suggests a connection between the two. However, it appears that the form of the nodules was important. Certain flint types and tools appear restricted to the elite. While it is possible that such tools and flint types were linked with prestige, this may not help the understanding of the general ideology behind flint as a whole. An examination of flint in profane contexts has much potential, specifically when compared to non-profane contexts, but lack of excavation limits this. As might be predicted, the most fruitful context for examination of ideology of flint comes from

burial contexts. In particular this shows that flint ceased to be used in graves by the Middle Kingdom, perhaps because metal was more shiny; that flint was not simply a poor person's substitute for metal; that physically non-utilitarian flint artefacts were placed in graves, etc. Nevertheless, even in the area of graves a more holistic approach is much more useful.

6. TEXTUAL EVIDENCE

6.1 INTRODUCTION

Earlier chapters showed that flint's ideological role was connected with certain general themes and that it was used in burials and temples. However, the specifics of religion, in the sense of the world of deities, is difficult to understand using archaeological evidence alone. For example, we can see that flint is connected with luminosity, but, without text, specific connections such as links with named gods, remain hidden. Here I turn to textual evidence, an area privileged by Egyptologists as a source of information on religion. We will see, however, that text needs the support of archaeology.

It is notable that all textual references to flint are religious (**2.3.4**). I have found no clear profane references, though some to generic stone tools. This is possibly because secular references to flint artefacts would not specifically use the word 'flint' as the specific material would be obvious to the audience. Alternatively, or additionally, most textual references to flint are New Kingdom and later, when flint was less regularly used in secular contexts.

A note should also be made here on the generally non-narrative nature of textual references. Flint is included in spells, in lists of materials, in lists of doorkeepers guarding the underworld, etc., from the *Pyramid Texts* through to Ptolemaic temples.

Text is often studied divorced from its archaeological contexts. Most of the elements in this thesis discuss text decontextualised from original findspots. However, much of the information concerning the connection between flint and meteoric iron, and flint and Osiris, comes from the contextual positioning of the text, either its relation to other texts, or, in the case of Osirian connections, its placement in temples.

In this chapter not every instance of flint in text is cited. Rather I refer only to clearly tropic descriptions, e.g. flint knives being described as swallowing and licking. I also cite instances where text may be used to explain flint's tropic nature e.g. where the shiny nature of flint is stressed.

6.1.1 ETHNOGRAPHIC PARALLELS: STONE AND THE CELESTIAL

The almost universal nature of links between stone and divinity suggest the same might be true of Egypt, and furthermore that it in part results from the material properties of flint (**2.2.2.9**).

The divine essence of stone features in various cultures. A few examples are cited here. In ancient Maya belief the Chacob carried stone axes which they hurled to the ground as thunderbolts (Thompson, J. 1972, 253; Thompson, J. 1975, 26; Schele and Miller 1986, 46; Sievert 1992, 21; Thompson, M. 1996). The Maya associated a snake-like deity with flint and obsidian, caves and lightening, and flint was linked to sacrifice and fire (Sievert 1992, 21–22). An Aztec creation myth featured a flint knife as an ancestor from which 1600 gods emerged. The northern Iroquois considered flint a male god conceived by a flint-tipped arrow (Brown 1995, 30).) Quartzite and quartz tools were associated with life and Ancestral Beings in western Arnhem Land, northern Australia (Taçon 1991). In eastern Arnhem Land a similar phenomenon was noted. For examples and references of Puebloan ceremonies involving monstrous flint knives and flint bird deities see Whittaker and Kaldahl (2001, 58). For Navaho associations between the sun and flint see Reichard (1963, 556). In the Irian Jaya province of Indonesia, a flat rock covered with quartz crystals is the stone 'house' of the sun (Hampton 1999, 202), quartz crystals are often called 'star stones' in the Grand Valley (Hampton 1999, 202) and spirit owners of rock are informed before the material is quarried (Hampton 1999, 258). The association of ancient flint axe-heads and arrowheads as celestial instruments seems almost world-wide, being documented for Europe, India, Japan, America, Africa, etc. (Blinkenberg 1911; Saintyves 1936; Leach 1972, 394–395). In many cases, flint is connected with storms and thunder. In classical Rome stood a temple wherein Jupiter was worshipped as *Juppiter Lapis* (Jupiter in the form of a stone), and in this place a cult object called lapis, *lapis silex* or *saxum silex* (Blinkenberg 1911, 30) was held. A passage from Livy (XXX. 43, 9) shows there were several such stones therein. The Navaho say flint is impervious to lightening though associated with it through shininess (Reichard 1963, 252–253, 556). Given that flint is connected with deities in all the above, and given the Egyptian concept of the immanence of divinity (at least in the Memphite theology[51]), it is probable that the same held true for ancient Egypt.

[51] The Memphite Theology is considered Rameside or Late Period. 'On the Shabaka Stone the text insists on the simultaneity of thought and its manifestation in language, and underlying this is a similar, but implicit, recognition of the mutual implication and interdependence of form and matter' (Hare 1999, 184).

Although it is unfashionable to make much of ethnographic parallels, certain cross-cultural consistencies are striking, notably the emphasis upon the celestial, divine nature of flint.

6.1.2 ANIMALS, GODS, THE CELESTIAL AND DIVINE OTHER

In ancient Egyptian texts, several references link flint and animals. The problem is that these animals may well refer to deities but we cannot be sure which deities. The link between animals and gods has historically led scholars to believe that Egyptian religion was somehow primitive or simple (Hornung 1982, 15–32) with the frequent misunderstanding that animals themselves were deified. Rather, the gods could reside in animals and characteristics of gods could be displayed through animal forms. Metaphoric use of animals in Egyptian religion is now established (Boessneck 1988; Goldwasser 1991; Goldwasser 1995, 58–62; MacDonald 2000; also summarised with further references by Wilkinson 1992, 57–115). Additionally, as mentioned above, in the Memphite Theology gods were immanent in nature, including animals. Thus, in Egyptian cosmology, the nature of gods is frequently expressed in animal terms, so that it is difficult to separate the two. However, in this chapter I have separated animals from named gods as it is not always clear to which deity an animal may relate.

While flint references cannot all be neatly classified, most fall into three celestial groups:

a) The solar including solar animals, goddesses who are the Eye of Re, Re and Horus.
b) The night sky group including meteoric iron, Osiris and Seth, and the Inundation, possibly including Taweret and Hathor.
c) Storm gods particularly Seth and Thoth. Usually storms are connected with the northern night sky but they can have solar connections, thus I have treated storm gods as a separate group.

There is overlap between day and night sky, particularly understandable as in certain periods ideas of solar rebirth and Osirian rebirth were combined. Both areas of the sky are transformational. The connection between flint and the celestial may seem unsurprising, given that gods anyway tend to be celestial. However, there is no strong link with a specifically southern night sky. There are also other areas not clearly linked to the celestial. These include connections with Isis, with the afterlife and with

doorkeepers including Anubis. Certain meta-themes are evident throughout; the theme of creation and the maintenance of maat[52] and protection.

6.2 SOLAR

6.2.1 ANIMALS

In this section on solar connections, animals generally linked with flint are considered before an exploration of named deities. Lions and snakes are particularly flinty. The discussion of the link between flint knives and ritual cattle slaughter (**5.2.1**) demonstrated that flint was not directly linked with the bovine animal, but rather with the act of execration or sacrifice, in the same way that, as we shall see, flint knives are used against the Apophis snake.

6.2.1.1 SNAKES

In this section I first discuss textual evidence and then archaeological and iconographic evidence linking snakes with flint and possible reasons for connections.

GENERIC SNAKES AND FLINT

Knives, whether flinty or metallic, are connected with snakes. In the *Pyramid Texts*, the uraeus and knife are connected through the reviving qualities of luminosity, a quality apparent in metal and flint (**4.3.1**). In much later funerary texts, otherworld beings may be called *ꜣsb* ('burning'; *WB*. I, 20 (18)) and the word can be written with either the snake or knife determinative (Leitz 2002 I, 79). Additionally, mined minerals are often associated with serpents (Aufrère 1991, 140–141).

The *Pyramid Texts* contain the earliest textual evidence linking snakes with blades likely to be of flint. However, because of the early date (**2.3.2.3**, **page 59**), flint is unsurprising, so any connection could relate either to the material or to the knife form.

Flint knives, in the *Pyramid Texts*, are described in ophidian terms, e.g. Utterance 228 (228b):

[52] Maat is variously defined but at its simplest stands for cosmological order.

prỉ nm sȝb km wȝḏ r.s ˁm n.f n.f ỉnsb n.f
‘the particoloured knife, which is black and green, has gone forth thereat and it has swallowed for itself that which it has licked’

(I use Sethe’s 1908–1922 transcriptions for the *Pyramid Texts* throughout the rest of this chapter, unless otherwise stated).

Similarly in *PT*, 290 (431a–b), the knife is described as *km*, black or dark, a colour/hue associated with fertility or again as ‘particoloured’, *sȝb*:

prỉ nm km ỉr.s
‘the black knife has gone forth thereat’ (twice)

or

prỉ nm sȝb r.s
‘the particoloured knife has gone forth thereat’

Fire and snakes have licking and consuming abilities (**4.2.1**). Ritner (1993, 97–98) believes licking, *nsb* (*WB* II, 334 (11-14)), parallels the ‘spitting’ of snakes (for spitting snakes see also Meurer 2002, 129–135 and below). The consuming nature of the flint knife is also apparent in the 17th Dynasty Papyrus Boulaq 17 (Cairo CG58038) 9, 7–10. Here *sḫp* (*WB* IV, 269(7–9)) is used (Luiselli and Matòhaf al-Miòsråi 2004, 36, 93, pl. 9):


sḫp ḥᶜw·f m ds; *wnm·n sw ḫt*
‘His body is consumed by the (flint) knife, the flame has eaten it’
(transliteration and German translation in Luiselli and Matòhaf al-Miòsråi 2004, 36, 93)

Note also the fire parallel, a recurring theme (**4.2.1**, and throughout this chapter).

Leitz (1996, 397–398, 420) provides an alternative reading of *PT* 290 – a multicoloured hide is used to contain a snake rather than the knife being multicoloured. His transliteration is *pr inm.* While the reading is plausible, I have found no other references to a multicoloured hide used in ancient Egypt to capture snakes. According to the Wörterbuch (*WB* I, 96 (15–20)), *inm* is not known as ‘bag’ in other contexts, but only as a skin. Furthermore, as other references link flint and snakes, and repeat the consuming abilities of the flint knife, I feel the knife translation is more probable. Colour symbolism[53] (**4.3.1**) shows ‘multicoloured’ can evoke the ophidian (though it can also relate to other animals) and solar imagery. The suggestion that these knives are snake-like is enhanced by their licking and swallowing abilities. The three properties of licking, swallowing and being multicoloured might individually be insignificant, but together are powerfully cogent.

Snakes also represent the foe to be defeated with flint knives. For example, *PT* 298 (442): Faulkner (1969, 89) translates: ‘Re arises, his uraeus upon him, against this snake which came forth from the earth and which is under my fingers. He will cut off your head with this knife which is in the hand of Mafdet (**glossary**) who dwells in the Mansion of Life.’ Here the knife of Mafdet is associated with the uraeus (Kees 1925, 3). Mafdet also attacks snakes (Utterance 295).

[53] I use the term ‘colour symbolism’ rather than ‘colour metaphor’ as ‘colour symbolism’ is a widely accepted and understood term in anthropology and archaeology, though arguably the term ‘colour metaphor’ might be more suitable (see **glossary**).

PT 366 (627a) discusses:


ỉtfȝ wr
‘The Great Saw’.

“’Carry one who is greater than you’ say they in your name of ‘Palace of the Great Saw’” (Faulkner 1969, 120). In this context, the Palace appears to be a kingly realm. ‘Great Saw’ is used for an Upper Egyptian deity taking the cobra determinative and it is possibly connected with ‘Viper Mountain’ of *CT* 31A, as well being linked with Osiris and the uraeus (Kees 1965, 108).

PT 376 (661a–b) was discussed earlier (**4.3.1**), where debate centred around whether *wbn*, ‘shiny’ refers to *Wnty* as the knife personified. It is noted that at a later date, the Apophis snake, Re’s archenemy, is called *Wnty*.

With the exception of Papyrus Boulaq, these connections between snakes generically and flint knives belong to the *Pyramid Texts*. Allen (1994) has suggested that the placing of texts within pyramids mirrors the daily movement of the sun god from west to east through the underworld and with him the rebirth of the deceased. The *Pyramid Texts* suggest that rebirth of the king is closely connected with this underworld and also the need to become one of the Imperishable stars (**glossary**) of the night sky. Flint in such texts may be considered solar in that the sense that the sun is reborn each day but also stellar in the connection with the Imperishable stars. The snake spells 228(228), 290(431), 298(442) are however clustered in the antechamber east wall, an area, which according to Allen (1994) is linked with the akhet, the solar place of rebirth at dawn, the sun having travelled through the Underworld to be reborn daily in the East.

NAMED SNAKE ENEMIES OF RE

While a general and often subtle connection between flint (or at least knives) and snakes emerges from the *Pyramid Texts*, from the Middle Kingdom onward the connection becomes explicit with identifiable snakes. As in the *Pyramid Texts*, flint is used against the snake, or may constitute part of the animal.

The snake on the mountain of Bakhu is described in *CT* II (160), 375b ff and *BD* 108, and 111, all versions of the same spell. Borghouts (1973, 114) translates a full

version:

> ‘I know that mountain of *Bꜣḫw* on which heaven rests. It is a plateau, 300 rods in length, 120 rods in breadth. Sebek, lord of *Bꜣḫw* is on the East side of this mountain. His house is of carnelian and there is a snake on the top of that mountain, 30 cubits in his length; 3 cubits from his foreside on are flint. I know the name of this snake: ‘who is on his mountain, who is in his flame’ is his name.’

Alternative translations describe the snake with knife in front of him, as is sometimes depicted in iconography (Fischer 1977, 156).

Bakhu is the mythical place from which the sun rises. The Spell describes how the snake will turn against Re at midday, and hence the site is a solar one. The snake can be identified as Apophis, firstly, because of his role as the ophidian archenemy of Re. *BD* 15B states that Apophis is daily defeated by Re and some variants state a *ds* knife is used (Allen 1974, 20-26). Secondly, his title, ‘He who is in his flame’ (*imy nsr.f*) is later linked to Apophis in Edfu I, 62, 9 (Borghouts 1971, 207–208; Borghouts 1973, 114 footnote 7). Interestingly, *inr*, ‘stone’, is also a name of Apophis (Aufrère 1991, 98–99).

An enlightening description of this snake occurs in Spell 108 of the 18th Dynasty Papyrus of Nu, British Museum EA10477 (Lapp 1997, pl. 22):


m ds wbḫ n bšw
‘of light coloured (shiny), spitting flint’

That the flint is bright and light is suggested by *wbḫ* (shining, bright, etc. – **4.3.1**). The quality *wbḫ* can also be applied to deities distinguished by their eyes (Leitz 2002 II, 333–334), for example *wbḫ-wḏꜣty* and *wbḫ-mrty.* In EA10477, *bšw* is uniquely written with the stone determinative. ‘The exact significance of *bšw* cannot be determined, but the adjective *wbḫ* suggests that it indicates a specifically bright variety of *ds*, and comparison with *ds ṯḥ* is tempting’ (Harris 1961, 139). However, *bšw* (*WB* I, 478(9)), related to *bši*, usually written with other determinatives such as fire (*WB* I, 476), also means to ‘break out’, ‘erupt’, ‘spit’ or ‘vomit’, and can refer to the uraeus flame. A fire demon is called *Bšw* (Zandee 1960, 135). Thus, the phrase conjures images of the spitting uraeus. British Museum EA 138 reads *bš ḥrt.f tk(ꜣ) r wpwt.w*, ‘His uraeus shall spit fire at their brow’ (translation and transliteration from Morschauser 1991, 102).

Explanations as to why spitting might be connected with flint are given in **4.2.9** and below **6.2.2.3**.

A similar snake occurs in 20th Dynasty Papyrus Turin 1993 2, 4–6 (Pleyte and Rossi 1869, 150 pl. 119 line 6; Borghouts 1973):

> 'I am purified by it–just as they did for their father Re-Horakhty, on the big mountains of *Bꜣḫw* when the great *mḥy* snake appeared, in the frontside of whose form the *mʿbꜣ* spear is, of one cubit of flint'
>
> (Borghout's translation).

Interestingly, the snake has a spear of flint. While flint spears are known from Early New Kingdom Mirgissa (**maps 2 and 9**; Vila 1970) and Buhen (**map 9**; Emery *et al.* 1979) I know of none as late as the 20th Dynasty. Alternatively, or perhaps additionally, the *mʿbꜣ*-spear could be attributed to a textual pun or confusion. In *BD* 115 is a snake called 'Him Who is in His Time' (*ỉmy-ḥꜣ(w).f*). This deity is also associated with the *mʿbꜣ*-spear and in the 18th Dynasty Papyrus British Museum EA 10477 version of *BD* 115 the scribe substitutes 'Him Who is in His Time' for 'Who Dwells in His Consuming Fire' (Allen 1974, 93), that is, the same flinty snake who is on the mountain of Bakhu, described above in *CT* 160 and *BD* 108 and 111. The Bakhu snake is 30 cubits in length. The Council of Thirty is known as *mʿbꜣ.t*. A return to *BD* 115 makes clear the connection between the Council and the spear (Piccione 1990, 234-235): here a homophonic pun is used to link the two. "Then Ra said to Him Who is in His Time *(ỉmy-ḥꜣ(w).f)*, 'Take the *mʿbꜣ*-spear, the inheritance of mankind.' This is how the Council of the Thirty *(mʿbꜣ.t)* came into being through Him Who is in His Time" [my stress].

Meurer (2002, 223–224) discusses this spear in the *Pyramid Texts* as 'Lieblings-Speer' (Favourite Spear) and parallels it with the claws of Mafdet in *PT* 519 (1211–1212). Faulkner (1969, 193) translates the passage as 'Take this favourite harpoon of yours, your staff which penetrates the waterways, whose barbs are the lightnings of Re, whose points are the claws of the feline Mafdet, wherewith I cut off the heads of the adversaries who are in the Field of Offerings.' Below, **6.2.1.2**, the link between flint and claws and lions is discussed. The lightening aspect of the spear invokes storm gods. The Imperishable Stars included later in the passage make clear a northern sky setting. We shall see that storm gods and stars both have flinty elements.

A tenuous connection between the *mʿbꜣ*-spear and flint can also be seen in the New Kingdom Harris Magical Papyrus 5, 9 (British Museum EA10042):


mˁbꜣ.f mds m wbn-rꜣ
‘His sharpened/flint spear [lances] the *wbn-rꜣ* snake’

Here *mds* (*WB* II, 183(1–13)) is used with the stone determinative, which Leitz (1999, 37, pl. 16) translates as ‘sharpened’ (though see **2.3.2.3**). I would see a flint connection. The *mds* weapon is used against Apophis (the *wbn-rꜣ* snake)[54]. *Mds* with stone determinative used to describe light is also employed in *BD* 39 against Apophis in 19th Dynasty Papyrus Berlin 3002.

Papyrus Bremner-Rhind is a collection of flinty ‘magical/religious’ rites designed to destroy the enemies of Re. The text is a description of actual rites, e.g. ‘This spell is to be spoken over (a figure of) ‘Apep drawn on a new sheet of papyrus in green ink, and there shall be made (an image of) ‘Apep with waxen body with his name inscribed on it in green ink, to be put on the fire that he may burn before Re….’ (Papyrus Bremner-Rhind 23, 6–7; translation Faulkner 1937, 168). Acts using flint knives against Apophis are introduced as spells to be recited and in Bremner-Rhind 26, 4 ‘they are to be trampled with the left foot, felled with the spear and knife’ paralleling other texts describing execration rites against Seth (**6.4.2**).

A flint knife is also used on the New Kingdom stela of Ramose (TT55). A transcription, showing *ds* with the stone determinative, is given in Roeder (1924, 133, line 6–7) and it is cited with transliteration in Midant-Reynes (1981, 41):

Nḥk ḫr n dmt.k ds r ḳrf ḥm.f

‘The snake deity, Nik, falls on your flint knife and writhes/twists himself up’

There are also other examples of flinty snakes: *CT* 311, in which a knife from ‘Viper Mountain’ relates to Sekhmet (**glossary**; below, **6.2.2.3**); the much later Papyrus Jumilhac, describing Anubis turning himself into a snake armed with flint knives (**6.3.3.1**). The snake is not the usual form of Anubis.

Examples of snakes consisting generally of stone, rather than specifically of flint, may be relevant. The second century AD demotic P. Carlsberg 302 (and other fragments) states that stones of mountain origin belong to serpents whose stone bodies emanate minerals (Smith 1998, 1078; Smith 2002, 130–131, 136–137)[55].

[54] Sometimes the weapon used against Apophis in the sky is simply stated to be the *ds* knife, without stone determinative, e.g. *Book of the Dead* 15B5.

[55] The idea of flint eminating from the body of reptilian monsters is also apparent in Navaho cosmology (Reichard 1963, 252, 556).

Flint also appears in text to be used against snake bites (**6.7.3**).

SUPORTING ARCHAEOLOGICAL EVIDENCE

Archaeological evidence linking knives and snakes is weak and tends to come from the Pre and Early Dynastic Periods. The Predynastic Period is outside the remit of this thesis but evidence is briefly discussed, as it is adjacent to the period in question.

In the Pre and Early Dynastic Period flint nodules are knapped into ophidian forms (**4.3.9**). However, flint snakes are not remarkable; of the 56 flint animals listed by Hendrickx *et al.* (1997–1998), only five are snakes. Hendrickx concludes that the snakes may be apotropaic.

Flint snake shapes were found near the Predynastic settlement of Mahasna: ‘At one point on the outskirts was found a deposit of curious natural flints, a selection from which is illustrated on PL. V. Though some are of a snake-like appearance, not all are so. They were found buried in the clean sand at a depth of one meter’ (Garstang 1903, 7). Collecting of stone ‘oddities’ also occurs at other times and places within Egypt, but is not confined to snake shapes or indeed to flints (**5.2.2.2**).

Finally, Predynastic and Early Dynastic flint knives may possess ivory handles decorated with a snake or the elephant and snake motif (Johnson 1990, 38–42, 44–45). For example, the Late Predynastic Gebel Tarif knife from Upper Egypt, Cairo 14265 illustrated in Johnson (1990, fig. 66) has two interlaced cobras, as well as a number of other desert animals. The Late Predynastic Brooklyn knife handle from Abu Zaidan (Brooklyn 09.889.118) has on one side elephants on top of interlaced serpents (Johnson 1990, fig. 67). The Late Predynastic 'Carnavon' knife handle, New York MMA 26.7.1281, also has elephants above serpents (Johnson 1990, fig. 70–71). The 'Pitt-Rivers' Late Predynastic knife handle, British Museum EA 68512, has an elephant on top of a single serpent (Johnson 1990, fig. 76). The Predynastic ivory knife handle in the Petrie Museum (UC16294) depicts two horned vipers (Keimer 1945, 3).

Such motifs are usually explained as desert animals representing enemies of Egypt. However, the snake and elephant motif is more than this. The two animals appear conjoined, the elephant astride or upon the snake, and with the two snakes entwined. Houlihan (1996, 171–172) believes the animals are fighting. Johnson (1990, 192) believes that the elephants are neither fighting nor trampling the cobras, but rather

co-operating with them. That this motif also occurs on other items such as a comb (Johnson 1990, 44) suggests its link with the flint knife is coincidental[56].

SUPPORTING ICONOGRAPHY

As it is usually impossible to tell from iconography whether a knife or arrow is flint or metal, unless sharpening is depicted (**5.2.1**), iconographic connection between snakes and weapons may relate to the weapon form, not the material.

On Old Kingdom tomb walls, snake hieroglyphs are mutilated with knife depictions and depictions of knife mutilation of snakes also occur later (e.g. Niwinski 1988, fig.2.c; Ritner 1993, 163–172). The snake is probably not particularly significant, as other potentially harmful hieroglyphs (people, crocodiles, bees) are also shown mutilated (Picardo 2004, 14).

Underworld doorkeepers, with knife or snake determinative, are frequently depicted carrying knives (Leitz 2002 I, 79–80). During the Middle and New Kingdom, other figures carry snake wands and magical knives (Darnell 1995, 88–89; Ritner 2006). Such figures are often protective and/or have solar significance, for example Bes or Hetep-Hor. Ritner (2006, 213) sees this as a functional link between dangerous animals and knives. Knives again are either metal or flint.

While iconography does not differentiate stone from metal arrowheads, flint was commonly used for arrows (**Appendix 1, 9.4**) and snakes and bows/arrows may be linked. The 'Neith sign' (**glossary**) of two bows appears on cobra deities from the Middle Kingdom, usually on the hood (e.g. for Wadjit, see Robins 1997, fig. 243). This plausibly links the cobra with the arrows of the Eye of Re, itself a saliently flinty entity (**6.2.2.4**). Certain flinty archer goddesses (particularly Neith and Sekhmet) represented the Eye and could take snake form[57]. Sekhmet's demons could be personified as arrows (Germond 1979), and, as we see below, two carry flint knives. Iconographic evidence, supplemented by text, shows that the arrow was the sun-god's weapon (Brunner-Traut 1956). The spitting uraeus and spitting goddesses of Re conceivably allude to the archer daughters of Re (below, **6.2.2.3**) who are fiery, like flint. Flint's fire connection may derive from the fact that arrows could have fire or flint heads; there is textual evidence supporting the fire-arrow connection (**4.2.1**).

[56] Snake staffs of later periods (none are of flint) and their magical significance is discussed by Ritner (2006). It is noticeable, though perhaps coincidental that 2 snakes, or double headed snakes, are particularly salient.
[57] Although Troy (1986) sees female figures carrying bows and arrows as indicating androgyny.

EXPLANATIONS FOR THE SNAKE-FLINT LINK

Snakes may be linked with flint because:

- Flint and snakes have physical similarities (**Chapter 2**)
- The Eye of Re is associated with flint and snakes (**6.2.2.3**)
- Snakes and flint are both creational (**6.7.1** for flint)
- Snakes and flint are both dangerous
- Flint and snakes are apotropaic

While snakes are in themselves dangerous, the wielding of them can be apotropaic. Deities such as Bes on apotropaic wands and upon cippi hold snakes, etc. (above). The Eye of Re is connected with snakes in that the uraeus is described as the Eye of the sun god. Snakes are creational in that they shed their skins; they are also primordial (Smith 2002 113, footnote 408 for a list of references).

That snake deities, particularly their front halves, are described as *ds* could allude to cult statues (as could the idea of Isis transformed into a block of flint – below, **6.6.4**). Alternatively, this could derive from the ancient Egyptian practice of describing gods and sharp body parts in terms of stone. *BD* 172, (Allen 1974, 180) reads: "(your) nails like knives of flint against the faces of them that do these (things) against thee". This is strikingly similar to Nut's fingers of flint and fingernails of copper used against Seth in Papyrus Louvre 3129 (Schott 1929, 58–59; Meurer 2002, 178–179). Mineralization of the deceased body is described in both the *Pyramid Texts* and the *Book of the Dead* (**glossary**; Blackman 1927, 191), and is related to the statue-like quality of gods. For example, in Papyrus Westcar, god-children are described as statues (Berlin 3033. 10.5–11.1; Parkinson 1997, 117–118, 126, footnote 53).

The question remains as to why, in text, it is frequently only the front half of the snake which is flinty. Flint could signify the particularly dangerous part, an idea, discussed below to explain the headless nature of Isis as a block of flint. Alternatively, it could relate to the materiality of representations of deities. There are many archaeological examples of the cobra hood being manufactured of a hard material such as faience or stone, while the back is of wood.

6.2.1.2 LIONS

Lions are largely solar animals in that the double lion god, Akher, guarded the horizon. Additional lions are linked with Horus and Re. The lioness goddesses personifying the Eye of Re are particularly flinty (**6.2.2.3**).

Lions' claws are linked with stone generically. On an inscription of Seti I, Pachet, a lioness goddess, sharpens her claws of stone (Kees 1965, 108 footnote 4). A god's arms and claws may be related, in that arms may substitute metaphorically for weapons. Thus, the flint arms of the Horus lion (**6.2.2.2**) may imply the claws of Horus.

Lions and their claws are also associated with knives. At Edfu (**maps 2 and 8**) lions are associated with the lord of the knife (Goyon 1985, 69–70). Kees (1965, 108 footnote 4) cites *PT* 1212, where the 'claw of Mafdet' used against enemies of the king, implies a claw metaphor for the knife. The claw/knife metaphor is extended to Pachet and other lioness goddesses (Kees 1965, 105–108). The claw is the lioness goddess herself (just as the sometime lion-headed goddess Isis may be depicted as a knife – below, **6.6.4**).

I know of no archaeological evidence linking lions and flint.
Possible reasons for linking lions with flint include:

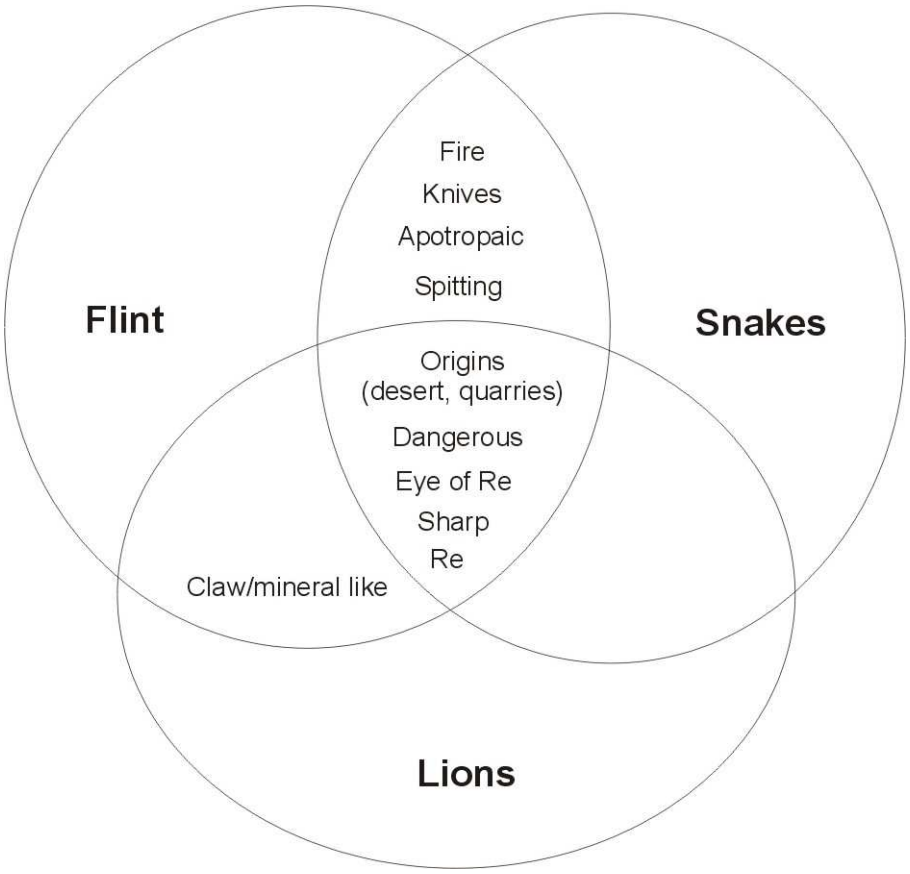
- Lions and flint both originate in the desert and wadis (**4.2.6**)
- Lions and flint are dangerous (**4.2.9** for flint)
- Lions' claws could have been considered stone-like because, like teeth and nails, stone is hard, sharp and light coloured (**Chapter 4 and above**)
- The claws of lions are, like flint, knife-like (**4.2.3**)
- Lions and flint are both solar
- Lions and flint are both connected with the daughters of Re and the *wedjat* Eye
- Lioness goddesses are associated with quarries, that is, places where stone, including flint is found

There are other links between lions and flint. Pachet roams the wadis of the Eastern Desert (Allen 2002, pls.1+2. lines 19–20). This is congruent with the link between the Eastern Desert, wadis and flint (**4.2.6**). Pachet is also associated with the Inundation which in turn is associated with flint (**6.3.2.5**). One of her titles is 'She who opens the ways of the stormy rains'.

Solar and dangerous aspects of the daughters of Re are difficult to disentangle. These goddesses are often lion or snake-headed (**6.2.2.3**).

Lioness goddesses, like snake goddesses, are often associated with quarries, that is, places where flint may be found, for example Sekhmet is possibly associated with *pr ds* (**6.2.2.3**, **page 233**). This may partly rest on the link between the desert, wadis, quarries and lions and/or relate to the flinty aspects of the goddesses who are the Eye of Re, that is, the lion connection may be incidental.

The connection between flint and lions and snakes may be simplified by the following sets:



6.2.2 NAMED SOLAR DEITIES

For Egypt, all minerals emanate from the gods (Aufrère 1983), particularly from snake deities (above, **6.2.1.1**, **page 223**). It is notable that those female deities with whom flint is connected are those who are the fearsome goddesses, the aggressive Eye of Re, rather than the peaceful nurturing goddesses.

6.2.2.1 RE

In a Ptolemaic text, stone is said to come forth from Re (Smith 2002, 140) and, as described below, minerals in general are said to be created by the Eye of Re. Above we saw that flint was a solar weapon against snakes. The following examples portray flint specifically as a magically efficacious weapon of Re. *PT* 298 (442) discussed above, (**page 219**) is perhaps the earliest. Bremner-Rhind 27, 21 (written in the 4th century BC, but perhaps following an earlier prototype) reads: 'Re triumphs over Apep in the presence of the Great Ennead, and the flint knife shall be stuck fast in his head in the presence of Re every day' (Faulkner 1933; Faulkner 1937, 173). Papyrus Salt 825

reads: ‘A knife of flint from Eastern Behdet is brought. It came forth from Re to repel his enemies by means of it’ (Derchain 1965, 139 and 7, col. 6/5). Flint in the Dendera (**map 6**) amulet table is used for a Re amulet (**4.3.1**).

Thus, flint knives are suitable divine weapons. The Eye of Re/ Horus may be embodied as a flint knife. Roth (1992, 138–140) controversially suggests that the *pssˇ-kf* in its early (flint) form may have functioned to cut the umbilical cord, a metaphor for the killing of the Apophis snake. The enemies of the sun-god are frequently dispatched using flint knives (see below).

The scarab is also solar, Re in his state of becoming. The association of the scarab with flint was introduced in **5.2.2.2**. However, the only possible flint scarab of which I am aware is the yellow flint scarab mentioned in Petrie’s notebook from a foundation deposit of Tuthmosis III at Koptos (**map 6**; Adams 1975, 105), possibly now in the Ashmolean (EE669). However, it could be that this scarab is not flint, but chalcedony or even the more rare Libyan desert silica glass, as is the scarab in the centre of a pectoral of Tutankhamun (**2.3.2.3**). It is not clear whether the Egyptians would have classified this as glass or stone.

Textual evidence however, links the scarab and flint. The Saite papyrus of Iahtesnakht (Verhoeven 1993, 95, col. 42, line 15 (part 1, 198; part 2, 64)) gives an interesting variant of *BD* 95. Here, Khepri seems to possess a flint knife:


srt.]n.i ds m ds imy ˁ ḫpri m nš[ni
‘I have secured the flint knife which is in the arm/hand of Khepri in the storm’.

However, the usual version of this text refers to the flint (or sharp) knife of Thoth. Additionally, there are references to flint amulets in the Dendera amulet table (**4.3.1**).

6.2.2.2 HORUS

Horus, like Re, is clearly solar, which may partly explain his flintiness. Additionally, he holds the title ‘Lord of the Knife’ (Wilson 1997, 1208), and as god of Letopolis was a snake fighter (Bourghouts 1971, 209), thus we might expect a flint link.

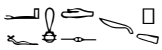
BD 125b, 7 translated by Allen (1974, 98) reads: ‘Oh flinty-eyed one who has come forth from Letopolis, I have not done crooked things’. Naville (1886 II, 292.7) gives twenty-four versions of the spell of which two are flinty.

His transcription of British Museum EA 9900 is given here as the most complete published rendering of the flinty phrase:


irty.f m ds
'his two eyes of flint'

The 21st Dynasty Cairo papyrus of *Bȝk-n-Mw.t* (Seeber 1976, pl. 31) contains the same hieroglyphic composition. The alternative for 'two eyes of flint' is 'two eyes of flame' (*irty.f m ḫt*). Thus, fire parallels flint but also connects with Horus. The connection between eyes and flint, as stated above is plausibly one of sharpness, luminosity and fire.

Finally, at Edfu (**maps 2 and 8**):


ꜥ.f mi ds
'his arm like flint'

This occurs in the passage describing Horus: 'his arm is like flint, he chases after foes and attacks them with his claws, (in the form of a lion) (Chassinat 1931 VI, 127, 11). A similar phrase using *mds*, also from Edfu describes the arm of Horus (Wilson 1997, 480). For further references to Horus and his '*mds* arms' written without the flint determinative see Leitz (2002 III, 469–471). The references to gods as '*mds* of arm with a spear' and '*mds* of arm with a knife' (Leitz 2002 III, 471) suggest that here *mds* simply implies 'armed'. Note also the lion connection in this Edfu text.

6.2.2.3 FIERY GODDESSES

The Eye of Re/Horus (the two are often interchangeable) can be presented as a knife, Hathor or Sekhmet (Junker 1917, 150–151). Other fearsome goddesses, all solar and hence fiery, often taking the form of snakes or lionesses, depicted spitting, wielding knives or the bow and arrow, may also represent the Eye. Of these Isis and Sekhmet are also flinty. The link between flint and the fiery goddesses may be predicated upon or enhanced by any of the following entities which are shared by flint and goddesses:

- The link between fire and the Eye

- The link between knives and the Eye
- The link between arrows and the Eye
- The link between the uraeus and flint
- The link between the lion and snake
- Spitting

The link between flint and fire was discussed in **4.2.1**. As stated above, the Eye of Horus of Letopolis was associated with either flint or flame. We shall see that goddesses personifying the Eye have fire connections.

As stated above the Eye is linked with knives. There are rare instances of the word *wḏ3t* meaning knife or sword where the destructive force of the *wḏ3t*-eye is emphasised (Junker 1917, 150–151; Wilson 1997, 288). The *wḏ3t*-eye may produce flame, thus is a flint parallel. It is written:

 or  .

It is unsurprising then that, as we shall see, Eye goddesses are described in knife terms.

We have seen above that both snakes and lions are connected with flint. We shall see that the goddesses who personify the Eye of Re have snake and lion connections and may be depicted spitting. Snake deities who represent the Eye of Re are associated with arrows (above, **6.2.1.1, 225**) or occasionally are archer goddesses such as Neith.

I first explore the flinty links of the Eye divorced from any explicit link with the goddesses who embody it, and consider Sekhmet personifying the Eye with flint connections (Isis is discussed separately below).

THE EYE AS A MINERAL

The Eye itself can be described as a mineral (Aufrère 1998, 10). Aufrère (1991, vxi) states that secretions of Osiris or the Eye of Horus form minerals and that the lunar eye allows the development of minerals (**5.2.2.2**). The Eye, as a tool of Re, is also associated with kings on expeditions to foreign parts prospecting for minerals, etc. as is shown by such artefacts as the stela of Hor (reign of Sesostris I) which reads: “To whom belongs what the sun-disk encircles, for whom the Eye has been brought with

all its brilliance, specimens in all its shapes'' (Galán 1994, 74). During the festival of Khoak, presentations of minerals mark the return of the Eye (Mariette 1870 IV, pl. 39, col. 142; Cauville 1997 I, 19 and 27; Cauville *et al*. 1997 I, 34.3–4; Cauville *et al.* 1997 II, pl. 26).

I summarize evidence dispersed throughout this thesis for the specific link between the Eye and flint. Evidence connecting the sun and the moon, the Eyes of Re or Horus, with flint was introduced in the **Chapter 5** in relation to the Deir el-Medina (**map 7**) nodules. The Eye connection of Horus of Letopolis has already been discussed. The relationship between the Eye of Horus or Re and flint knives is perhaps also implied in medical texts (**6.7.3**). Below, I discuss Ptolemaic P. Turin Museo Egizio 1791 where the flinty Eye of Horus comes forth from Seth. It may be pertinent that there is also an eye make-up called *dsds* (written without the stone determinative (*WB* V, 487 (7)). The phrase 'sharp-eyed' contains the word *ds* (**4.2.2**).

Finally, at Dendera, a *wedjat* Eye amulet was said to be made from flint (**map 6**; Mariette 1870 IV, pl. 87).

There is little archaeological evidence linking flint and eyes. Eyes of statues and coffins can be of stone, but these tend to be travertine and obsidian. While flint eyes are attested, usually there has been no scientific investigation to confirm the material. For example, Foreman and Foreman (1962, 43) suggest that the eyes of Meidum (**maps 3 and 4**) statues were of 'milk-white flint'. Even if this analysis is incorrect, the fact that a modern investigator identified the eyes as flint makes it unsurprising that the ancient Egyptians may have done the same. There are also examples of quartz or rock-crystal eyes which, given the conceptual link between quartzite and *ds* (**2.3.2.3**), which might explain the metaphor of the *ds* eye.

SPITTING GODDESSES

From the New Kingdom the Eye of Re is personified in goddess forms. These daughters of Re (the Eye of Re) may be personified as spitting serpents or human-headed spitting goddesses. As well as a hostile act, spitting is often a creative act (Ritner 1993, 74–88). Two uraei from the tomb of Rameses VI spit into receiving hands, a gesture of creation (Piankoff and Rambova 1954, fig. 111).

Iconographic depictions of 'fire-spitting snakes' often show small round 'droplets' issuing from the serpent's mouth which appear more akin to either venomous droplets or the depiction of flint spalls in Old Kingdom knife sharpening scenes (e.g. the 5th Dynasty mastaba of Hetepka, Martin 1979), than anything

resembling fire[58]. However, that the allusion was to fire issuing from the mouths of these serpents may be justified through textual evidence describing the fire spitting uraeus. The spitting cobra is frequently depicted in Egyptian art, and is probably the black-necked spitting cobra (*Naja mossambica pallida)*, which can spray toxic venom up to three meters away into the opponent's eyes. It is likely that this cobra gave rise to the uraeus (Houlihan 1996, 168).

Only Sekhmet is discussed in this section, as her connection with flint would appear to be particularly solar. Isis and Taweret on the other hand, although daughters of Re, may be linked with flint through the northern sky and are thus discussed separately.

SEKHMET

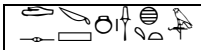
One would expect Sekhmet with her desert, Eye, knife and fire connections to be flinty. As the 'Knife of the King' she embodies divine power (Morschauser 1991, 140). She is 'mistress of fire' who can shoot flame from her eyes (Borghouts 1973, 136) and has the epithet 'Lady of the Eastern Desert' (Sethe 1923, 43–44; Germond 1981, 106). Horus is 'Lord of Sekhmet' and the Horus Eye is embodied in the slaying knife (Wilson 1997, 288). Finally, Sekhmet can be portrayed in leonine or snake form. As knives, fire, lions, desert and Eyes all have flint connections we might expect Sekhmet to belong to this same metaphoric set. This is indeed what we find.

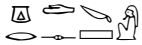
In the Ptolemaic *Book of Hours* (British Museum EA10569) is a description of the deity 'Flint Knife of Sakhmis' (Faulkner 1958, 17).

> *The Shining Light upon...*
> *To the Knife of Sakhmet.*
> *The Cord of fettering.*
> *The great Flame which consumes those who are in...*

I use Faulkner's translation which does not specify *ds* as `flint` though his transcription clearly contains the stone determinative:

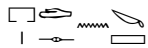
[58] It is tempting to see a metaphoric connection here between the flint spalls and the venom of the snake. The fact that the Egyptians portrayed both in a similar way may perhaps be used in support of the idea that both were considered similar, if only for their pain causing effect.


ds nw šḫmt
‘knife of Sekhmet’

Similarly, the god  ‘The bearer of the flint knife’ is linked with Sekhmet (*WB* V, 486 (20); hieroglyphs from Gauthier 1925–1931, 140; presumably the original text was meant to begin:  .

Papyrus Jumilhac mentions two flint-knife carrying demons often associated with illness and with Sekhmet (**6.6.3.1**). Thus, there is an indirect link between Sekhmet here.

From the 19th Dynasty temple of Seti I at Abydos (**map 4**) is the inscription:


pr n dsw/ prn ds)
‘Dwelling of the flint knife’ or ‘mine of flint’

This is associated with Sekhmet (Mariette 1869 I, pl. 45 cited in Brugsch 1880, 964, Gauthier 1925, 140). It could well be a quarry (Aufrère 1991, 63). However, in Mariette’s version *ds* is not written with the stone determinative.

CT 311 reads: ‘Sekhmet is she who wielded the Viper-Mountain knife on the night of the great battle....’ (Buck 1935 IV, 67; Faulkner 1977, 228). The mountain itself has flinty connections, as in *BD* 31a ‘My teeth are of flint. My teeth are of Viper (Cerastis) Mountain’ (Naville 1886 II, 100.1). Kees (1965) discusses ‘Viper Mountain’. It first appears in the *Pyramid Texts* in connection with claws and teeth and is associated with gods such as *ꜥnti*, *Mꜥti.t* and *Pꜣḫt*. As stated above, there is also a suggestion that Viper Mountain as *ꜣtf.t* may be associated with *ỉtfꜣ-wr* ‘the great (flint) saw’ of *PT* 627.

Sekhmet also has both flint and snake connections in 30th Dynasty British Museum EA 10252 (Schott 1929, 48–49). The relevant passage may be translated: ‘Sekhmet! “Flaming one!” Fire Snake! “Snake on the fire!” You shall fell Seth, the wretched one, with your flint knives.’

As the archetypal protective and dangerous daughter of Re, Sekhmet is clearly flinty. She may be understood as the raging version of pacified Hathor/Isis; while Hathor appears to have general mineral connections (Aufrère 1991, 133–136), it is

only in her form as Sekhmet, that she is specifically connected with flint.

6.3 STELLAR CONNECTIONS

Within the realm of the stellar and flint, there appears to be a constellation of ideas surrounding the northern night sky, meteoric iron, Seth and Osiris. With the exception of Wainwright's (1932a and b) observations on the connection between Seth, meteoric iron and flint, these entities do not seem to have been previously discussed as a group.

6.3.1 THE NIGHT SKY

The connection between flint and the moon was discussed in **5.2.2.2**. The connection between flint and the "opening of the mouth" ceremony was introduced in earlier Chapters (**4.3.1** and **5.2.4.7**) and is further discussed below in **6.7.3.1**. Several of the implements used in this ceremony, particularly the adze, foreleg of an ox and the *nṯrwj*-blades are stellar (Roth 1993). The adze and foreleg particularly relate to the northern sky.

6.3.2 NORTHERN NIGHT SKY

Here, the northern sky is briefly discussed (more fully discussed in Graves-Brown 2008b). It will be shown that flint is clearly connected with the constellation of the Great Bear, Osiris, Seth and meteoric iron and less clearly with the Inundation and Isis. These elements all appear interconnected.

6.3.2.1 METEORIC IRON

The connection between flint and meteoric iron may relate to various possible interconnections of the two which are discussed below:

- Seth
- The northern night sky
- Meteoric iron and flint as materials used for overthrowing Apophis

The material with which flint is most commonly juxtaposed in texts from the 5th Dynasty to the Ptolemaic era is *bi3*. That *bi3* is meteoric iron is now widely accepted (Faulkner 1969; Harris 1961, 166–168; Rendsburg 1982; Wainwright 1932a, 3–15). While it has a times been associated with copper (Trigger 1969; Nibbi 1977), that it is described as 'of heaven' (Harris 1961, 59), suggests a meteoric quality.

Wainwright (1932a and b) seems to have been the first to postulate a connection between *ds*, *bi3*, storms, Letopolis and materials used to overthrow

Apophis. *Bi3*, the celestial metal from which heaven was said to be made could be translated as 'wonder' and is paralleled with *ds*, suggesting a metonymic relationship between the two.

Flint is associated with meteoric iron in several texts including the Abusir Papyrus (**6.7.1.3**). The Second stela of Beth-Shan of Seti I parallels meteoric iron limbs with flint wings (**6.7.3**). The king describes himself as a wall of *bi3* in several texts (Selim 2004), though on the First Hittite Marriage Stela of Rameses II, 235, 8 he is likened to a flint wall (Kitchen 1996 II, 87). In the 20th Dynasty Turin Magical Papyrus (Papyrus Turin 1993, Pleyte and Rossi 1869, 149, pl. 118, line 12 cited in Harris 1961, 138 footnote 17) flint and meteoric iron are used for limbs of a figure. I would transcribe this as *m ds ….m bi3 pt*, 'of flint…(and) of meteoric iron'. In Papyrus Bremner-Rhind (British Museum EA10188) the spear used against the enemies of Re is either flint or *bi3.* Compare Bremner-Rhind 26, 4, where a spear of flint is suggested, with 22, 9 and 27, 9 where *bi3* is suggested (Faulkner 1933; Faulkner 1937; Aufrère 1991, 565). Amulets of *ds* and *bi3* are mentioned together at Edfu VI (**maps 2 and 8**; Chassinat 1931, 299, 12; Aufrère 1991, 565 and 568 footnote 36; Midant-Reynes 1981, 4). Flint is not so frequently mentioned in text as to make this parallel between the two materials coincidental.

Seth is associated with both flint and meteoric iron. Spears of meteoric iron or flint are associated with the killing of Seth. Additionally, Seth hurls a spear of meteoric iron *mt3.f nt bi3* against Apophis (Lefébure 1868, 62; Aufrère 1991, 433, 442 footnote 18; Allen 1974, 85) and we have seen that he may also employ flint. In text, *bi3* is associated with the northern sky partly through the Sethian link, Seth being connected with the northern sky, and perhaps also because of the *bi3* waters of the northern sky (**6.3.2.3**).

What are the other correlations of flint and meteoric iron (*bi3*)? Both are collected for their odd shapes; both used for manufacture of amulets, and both may be paralleled in text.

Odd shaped stones were thought to come from heaven and were called *bi3*, 'marvel or miracle'(**5.2.2.2**). In the Dynastic Period flint oddities were especially selected at Deir el-Medina (**map 7**), Elephantine (**map 8**; Dreyer 1986, 96–97, 153, pl. 57) and Mirgissa (**maps 2 and 9**; Vercoutter 1970, 329, pl. 27. 28), Abydos (**map 4**; Petrie 1903b, pl. 9; Kemp 1989, 73, fig. 24.9) and, as mentioned above, from the Predynastic, near the settlement of Mahasna.

As for archaeological evidence, Roth (1992, 137) mentions an eleventh dynasty amuletic *psš-kf* with a blade of meteoric iron, the rest being silver. However, as she rightly points out, the iron may have been chosen for rarity value, not for any connection with *ds*. Additionally, a *psš-kf* from the Old Kingdom was found associated with iron (Dunham and Young 1942). The close connection between the *nṯry* blades and the *psš-kf* is well attested archaeologically and in texts concerning the "opening of the mouth" ceremony (van Walsem 1978, 223–224). In certain texts the *nṯry* blades are called *sbꜣwj* (Roth 1993, 57–58), 'stars' and are said to be made of meteoric iron (Roth 1993, 59).

6.3.2.2 THE SCEPTRE OF FLINT

I first give the translation of the relevant *Book of the Dead* passage from Allen (1974, 100):

> He who is in Moringa is my name. "What did[st thou] pass through?" say they to me. I passed through a settlement north of a thicket. "What didst thou see there?" A leg and haunch. "What didst thou say to them?" I have seen rejoicing in these lands of the Phoenicians. "And what did [they] give thee?" A firebrand and a block of green fayence. "What didst though do with them? I buried them on the shore of the mꜥꜣt(-lake) as an evening offering." "And what didst thou find on it, on the shore of the mꜥꜣt(-lake)?" A sceptre of flint; Breath-Giver is its name. "What didst though do with the firebrand and the block of green fayence after thou hadst buried them?" (I grieved over them, took them out,) quenched the fire, smashed the green block, and threw (them) into the lake. "Come thou, enter through this the gate of (this) broad hall of the Two Truths, for thou knowest us."

Naville (1886 II, 324–325.25) gives two versions of this spell taking the stone determinative (Louvre III, 93 L3092 the papyrus of *Twri* and the limestone tomb of Rameses IX at Thebes; **map 7**). The Papyrus of Ani (British Museum EA10470) also incorporates the stone determinative (Budge 1913, 590).

The passage needs some explanation to demonstrate the location of the land and to draw out Sethian links.

This whole scene can be interpreted as a reference to the death of Osiris (Drioton 1953, 88–89; Griffiths 1980, 30–34; Assmann 1989, 150; Aufrère 1991, 234 footnote 24; Willems 1996, 185). The Great Bear can also be seen in this light as is

discussed below, **6.3.2.3**. The land in which the deceased finds himself is the 'lands of the Phoenicians'[Fenkhu], to the north-east of Egypt. Both Drioton (1953) and Barguet (1967, 163) see references to the polar constellation, suggested by the leg and haunch and northern location. I concur. That we are in the sky is not explicit, but as the arena is the land of the gods it is likely to be either the Underworld, or the sky. In *BD* 17 the moringa tree and coffin of Osiris are in the northern sky with *Msḫtyw* (Allen 1974, 29).

I give a transcription and transliteration of the section from the Papyrus of Ani:


ḏʿm/wȝs n ds rdi-ṯȝw rn.f
'a sceptre of flint; Breath-Giver is its name'

Whether this is a *ḏʿm* or a *wȝs* sceptre is debateable, as it is in other *Book of the Dead* papyri. The giving of a *ḏʿm* sceptre would make sense in the light of *CT* 469 (Buck 1935 V, 387, Faulkner 1977, 102) where the *ḏʿm* sceptre is given to the deceased by Orion in the northern sky, and is the means by which s/he is transformed into a god. Eyre (2002, 130) referring to *CT* V, 390b-91l, places this event in the western sky, though this need not be a problem as the west and north are ideologically interchangeable (Posener 1965[59]). Additionally the Four Sons of Horus (**glossary**), who, as we shall see, are linked to *Msḫtyw* and have flint connections of their own, are associated with the *ḏʿm* sceptre. However, the 'sceptre of flint' in the Saite *Book of the Dead* of Iahtesnakht is clearly a *wȝs* sceptre (Verhoeven 1993, 125 col. 56, line 14 (part 1, 237; part 2, 84):

Whether a *ḏʿm* or *wȝs* sceptre is intended, both were cosmically linked and interchangeable (Clagett 1995 I, 280, 379 note 18). That the *wȝs* sceptre had cosmic links as a support for the heavens has long been recognised (Wainwright 1932b, footnote 9; Clagett 1995 I, 379 footnote 18). Additionally, the *wȝs* sceptre is associated with Seth (Wainwright 1932b, 165; te Velde 1977, 89–91). Sethian heads surmount such sceptres, and the nome sign of Oxyrhynchus, one of the nomes of Seth, consists of two *wȝs* sceptres.

[59] Nut was usually displayed from east to west with head to west, but certain depictions show her head was to the north-west and her lap to the south east. The south and east were both places of beginnings, opposite to the north and west.

The sceptre of flint, as 'Giver of Breath' in the northern sky, plausibly alludes to the northwind. The northwind and the north sky are connected (Wallin 2002, 124). The northwind is important for the deceased's revival (*PT* 1551 (581) Faulkner 1969, 235; *BD* 182, Allen 1974, 196) and depictions of 'wind' being given to the deceased appear in New Kingdom iconography (e.g. the tomb of *Nfr-sḫrw* at Thebes published in Piehl 1886 I, pls. 113 k and 114 l). The importance of the northwind in giving life (breath) is also shown, in Papyrus Berlin 3049 (Assmann 1995, 183) and an 18th Dynasty Osirian hymn in TT258 (Assmann 1995, 113). The boreal wind is in some passages associated with Seth (Zandee 1963), but also with Osiris. Both gods are hyperborean, and both are linked with the Great Bear.

It is also possible that this sceptre alludes to the *mꜥbꜣ*-spear which, as explained above, has strong flint connections and is associated with the northern sky in *PT* 519 (1212). Meurer (2002, 224) describes the point of this spear as having two bones (*ḳs.wy*), though this could be alternatively translated as two points, perhaps mirroring the two flint mooring-posts to which we now turn.

6.3.2.3 MOORING POSTS OF FLINT

The tomb of Rameses VI carries a description of the constellation *Msḫtyw* (Piankoff and Drioton 1942, 24, 95) with flint mooring posts. Drioton, (cited in Piankoff and Rambova 1954, 400) translates the whole section from the tomb of Rameses VI. As this is the key text for my discussion, here is the relevant sections of his version:

> The Spirits of the North, these are the four gods among the followers. It is they who repulse the tempest of the sky on the day of the Great Contest. It is they who take hold of the fore-rope and who manoeuvre the aft-rope of the barge of RE, together with the crew of the Imperishable Stars. The four gods who are at the north of the Thigh, they are resplendent in the midst of the sky, south of ORION, they then return to the Western Horizon.
>
> As to this Thigh of SETH, it is in the Northern Sky attached to two firestone [flint] mooring posts by golden chains. It has been given in charge to ISIS, in her form of a female hippopotamus, who guards it. The Water of his Gods is round about as gods of the horizon. RE has placed them behind it together with ISIS, saying:

> Prevent it going to the Southern Sky toward the Water of his Gods which issued from Osiris, He who is behind Orion….They appear in the regions of the sky, in the northern sea [wȝḏ wr[60]]. It is for them. The Northern Horizon is their country.

The illustration of this scene and its textual description (Piankoff and Rambova 1954, 168) are paralleled in Rekhmire's tomb, the upper register depicting funerary rites surrounding mooring-posts (discussed by Willems 1996, 115–116). Here there are two mooring-posts to which a leg is offered. The bull is sacrificed and a female figure stands in attendance. In the lower scene the barque makes explicit the watery nature, and two women sit by mooring-posts as mourners. Willems sees both mooring-posts scenes as part of a rite enacted at the Place of Embalming, recalling the vigil of Osiris (like *BD* 125), and related to the *Stundenwachen* (Willems 1996, 116). The *Stundenwachen* is in turn related to the Great Bear (Willems 1996, 184–185).

The Lake of the Two Knives in Egyptian mythology is an apt parallel to the two mooring-posts as the Lake also involves heavenly waters relating to the north of the sky and the rebirth of the god. The Lake of the Two Knives is known from New Kingdom texts and is thus contemporary with the early descriptions of *Msḫtyw*. *BD* 153 reads: 'I sit in the barque (of Re), I cross the Pool of the Twin Knives to the northern sky' (Allen 1974, 152). From the 19th Dynasty, the Lake of (Two) Knives (*ỉw dsds*) can substitute for the Lake of Fire (*ỉw nsrsr*). The Lake of Fire, as well as a means of punishment of the damned, is also a mechanism of transformation from which the sun-god, in hermopolitan and also heliopolitan myth, is born (Altenmüller 1966; and briefly mentioned in Bourghouts 1971, 103–104). Altenmüller (1966, 90) also states that this lake was related to the Old and Middle Kingdom Whirlpool 'gewundener Wasserlauf', in which the god battles against Apophis (Alltenmüller's further link to the Sea of Destruction of the *Pyramid* and *Coffin Texts* (**glossary**) is confirmed by Stewart, 1967). As in the constellation *Msḫtyw*, here we have the site of the battle in the sky. As well as the metaphor of the daily birth of the god, a New Year theme is also discussed by Altenmüller (1966, 90).

The connection between Isis and the mooring-posts, is not, in my opinion, entirely direct. At least part of the reason why the mooring-posts are made of flint is that flint is a component of the northern sky, a flinty realm. It is true that Isis might be

[60] For Osiris as the 'Great Green' see *Pyramid Text* 628/29, Utterance 366 (Faulkner 1969, 120); Kees 1941, 113. For 'Great Green' as the Primeval Ocean, the Inundation etc. see Vandersleyen 1999.

expected to have flinty connection as she is an embodiment of the Eye of Re (Darnell 1997), she has both knife and snake links (Kees 1925, 4) and on New Kingdom coffins is showing as a spitting goddess. In BD 69 she is the 'fiery one' and in Plutarch's story suckles a child with fire to immortalise him (Darnell 1995, 91). However while Isis has connections with flint in the north sky, she has no clear solar links with flint.

Isis is in the northern sky, as in the New Kingdom *Contendings of Horus and Seth*, because she tethers Seth (Lichtheim 1976, 222). However, additionally, Isis (like her sister Nephthys) is herself a mooring-post in the *Pyramid Texts*. The Eye of Re, a form of Isis, is often depicted as a uraeus and can be associated with flint and even the mooring-post. The speech of the Uraeus-goddess on Hatshepsut's Chapelle Rouge confirms the link with the uraeus and mooring-post through the passage 'I will moor her as the mooring post of humankind' (Lacau and Chevrier 1977, 115, 117, 119; Gillen 2005, 19). The serpent links of flint are discussed above. Isis as a hippopotamus may also relate to the Inundation (**6.3.2.5**).

The reference may even be to the "opening of the mouth" ceremony and flint *psš-kf.* This aspect will be discussed below but, briefly, the "opening of the mouth" text was placed on the north wall of the *Pyramid Texts* and includes the foreleg of Seth (Roth 1993, 70–71), just as this constellation includes the foreleg of Seth and is placed in the northern sky.

Finally, there is also one Old Kingdom instance of *pr ds* ('House of flint/knife') written with mooring-post determinative in a 3rd Dynasty tomb (Berlin 1105.1106 (*WB* V, 486 (19); Urk I 3, 8, Sethe 1903). This could however be a scribal mistake.

6.3.2.4 HIPPOPOTAMI

In the above text Isis in hippopotamus-form guards the leg. Isis is connected with a better known hippopotamus goddess, Taweret (Desroches-Noblecourt and Kuentz 1968, 112) who is herself associated with the northern sky (Desroches-Noblecourt and Kuentz 1968, 221 note 500). At the Ptolemaic temple of Edfu (**maps 2 and 8**), an amulet in the shape of the hippopotamus goddess Taweret, made of flint and, possibly significantly, meteoric iron, is mentioned (Chassinat 1931, 299/12).

This is probably an allusion to the Inundation (discussed separately below). Images of a hippopotamus goddess holding the Eye allude to the heliacal rising of Sothis (**glossary**) which preceded the Inundation (Darnell 1997, 47, note 5). Perhaps the reference here is to Isis-Sothis, the sharp one who heralds the Inundation. Sothis is connected with this constellation in *CT* 482 (Buck 1935 VI, 50–52). We may thus

imagine that this hippopotamus goddess with flint prop is a fusion of ideas surrounding Isis-Sothis-Taweret and the Inundation.

However, there is also a link between flint and hippopotami (introduced in **4.2.3**); perhaps due to the hardness and colour of both ivory and flint, and/or the links between Seth and Taweret, fire and meteoric iron and the northern sky, all flint related elements. Plutarch mentions the hardness of Seth and that the Egyptians believed his bones to be made of meteoric iron (*De Iside et Osiride* 62 in Griffiths 1970, 217–218). Below I show that, although Seth is textually linked with flint, this may partly result from his and flint's connection with the northern sky.

Additionally, there are textual links between hippopotamus ivory and flint, or at least between ivory and the knife. The word for branding, '*ȝbw*' can be written with a fire or knife determinative (**4.3.1**) and is also used for ivory of hippopotamus tooth as well as elephant tusk. The possibility that fire branding was equated with scarification could explain the knife-fire connection, though not the further connection with ivory. It could be coincidence. If we assume the knife determinative represents a flint knife and accept the link between flint and fire and furthermore that ivory and flint were connected through hardness, the web of metaphors strengthens. Interestingly, meteoric iron can also be written with the tusk determinative (F18 in Gardiner's sign list). The writing of the determinative for *ȝbw* with a knife or flame could alternatively imply a metal, not flint knife relating to the possible connection between the knife form and fire (**4.3.1**).

Flint objects were copied in ivory, at least in the Pre–Early Dynastic Periods. A hippopotamus-ivory copy of a Predynastic Egyptian flint knife was found in Israel (Poplin 1992). Poplin suggests that flint, like ivory, was significant for its hardness. An ivory object inscribed with the name of Aha (now in the Pitt Rivers Museum, accession number 1896.53.2, Petrie 1901, 21, pl. 36), seemingly imitating a flint blade, is either of hippopotamus or elephant ivory. A Predynastic ivory axe was found at El Amrah (Randall-MacIver and Mace 1902, 41). However, as the Predynastic period also sees model tools and weapons in clay and wood (Petrie 1920, 25), copying of flint in ivory may be fortuitous.

Other evidence of the ivory-flint connection is more tenuous. While many Predynastic–Early Dynastic knives are hafted using ivory, and several bear the elephant motif upon the handles, this motif also occurs on non-flint items and may relate to the knife form not the flint material (**6.2.1.1, page 224**). The link between flint and ivory might also be said to explain the knife-shaped 'magic wands' of the Middle

Kingdom and New Kingdom (although usually considered typically Middle Kingdom, 'wands' are depicted on the New Kingdom tomb walls of Rekhmire), usually made of hippopotamus ivory. It is also noticeable that deities on these wands carry knives and in several cases (Petrie 1927, pls. 36 and 37) Taweret bears a striking resemblance to the figure of Isis in form of hippopotamus who takes charge of the flint mooring-post in the northern sky. However, while in modern literature these 'wands' are sometimes called 'knives' it is unclear if the Egyptians themselves thought of them as such. They are only broadly similar in shape to contemporary Middle Kingdom flint knives.

6.3.2.5 THE INUNDATION

There is a link between the Great Bear and the Inundation.

The connection between Inundation and sky is shown in *PT* 507–509, Utterance 317 (Faulkner 1969, 99; Griffiths 1980, 153) where the mythical pools in the horizon are associated with the Inundation. In the Cenotaph of Seti I, the body of Nut carries the words 'in the first month of Inundation after Sothis has appeared' (Frankfort 1933 I, 74; II, pl. 81). The Rameses VI tomb text clearly links *Mshtyw* with the 'Great Green', at times linked with the Inundation, as exemplified in Papyrus Brooklyn 47.218.48 (Vandersleyen 1999, 189). The mooring-posts in the *Book of Day* of Rameses VI are water linked as is the wish to prevent the leg from going down to the water of the 'Gods in the Duat' (**glossary**). The watery nature of the leg explains its uterine appearance in illustrations (e.g. the tombs of Rameses II and Rameses III illustrated in Neugebauer and Parker 1969 III, pl. 5, pl.11 respectively)[61]. te Velde (1977, 85) cites an offering given to protect Osiris from the water of the arm (Foreleg) of Seth (*PT* 20, Utterance 29; Faulkner 1969, 6); the Foreleg of Seth is dangerous (te Velde 1977, 87). Papyrus Leiden I 343 and 345, rt. II, 2–4 is quoted: The *ḫpš* [Foreleg] of Seth is against you; the *ktp* of Baal[62] is struck in your head; the *bi3* of Horus is struck in your vertex' (also cited in Bourghouts 1978, 18–19). The leg is so dangerous that the name *ḫpš*, came to refer to a scimitar (*WB* III, 270)[63].

Seth the northern sky storm god is associated with *bi3*, the name also given to the well in the sky (WB I, 439 (6–9), Wainwright 1932, 11; Allen 1989, 9). It could be then that he controls the Inundation. *CT* 353 (Buck 1935 IV, 392–396; Faulkner 1973

[61] The sarcophagus of Seti I also shows Osiris coiled in a circle within water with accompanying inscription: *This is Osiris; he encircles the underworld*. (Griffiths 1980, 154-155).
[62] Seth was associated with the foreign god Baal.
[63] The knife, from the 18th Dynasty, may also occasionally be written with a determinative shaped like the *ḫpš* (Desroches-Noblecourt and Kuentz 1968, 16 and 173-174 note 202). Given that there is a strong connection between the *ds* knife and flint, perhaps the *ḫpš* also has flinty connections. Against this is the fact that the *ds* knife is not one of those listed as having a determinative resembling the *ḫpš.*

I, 285) translates: ‘O Nile-god...grant that I may have power over water just as Seth had power over the water in the eye(?) of Osiris on that night of the great storm’. Plutarch too, describes Egyptian belief in the watery connections of both Seth and Osiris (*De Iside et Osiride* 33, Griffiths 1970, 169–70).

The Inundation theme of the northern sky is enhanced by the presence of crocodiles, according to Plutarch (*De Iside et Osiride* 75, Griffiths 1970, 237), harbingers of the annual inundation. The northwind also heralds the Inundation (Desroches-Noblecourt and Kuentz 1968, 116, 223 note 520, though see Griffiths 1970, 448). As stated above, the hippopotamus goddess of the northern sky is likewise linked with the Inundation. The Inundation was celebrated as the start of the Egyptian New Year and was a time of presentation of minerals, including flint (Aufrère 2001, 159–160). Aufrère (1991, 296) points out allusions to the New Year in the constellation *Msḫtyw*.

Thus, as well as being associated with the Imperishable Ones, Inundation allusions in the form of the northern sky were perhaps placed on tomb ceilings because of their watery rejuvenating properties as well as their link with the vigil of Osiris and hence rebirth. Desroches-Noblecourt and Kuentz (1968, 112–124) discuss the general revival properties of Inundation festivals during the New Kingdom and later.

BD 125 shows the northern sky to be an abode of Osiris. The leg of Osiris is associated with water and the Inundation (Aufrère 1991 I, 50 footnote 412). The Egyptians saw the Nile as the personification of the outflow of Osiris, (Kees 1941, 408; Griffiths 1980, 151–153; Darnell 1995, 63), though debatably not specifically equated with the Inundation during the earlier periods (Griffiths 1980, 155–163). Yet, it would seem a short step from an equation with the Nile to a link with the Inundation and Osiris’ early connection with fresh water and new vegetation (Griffiths 1980, 156–157) to the Inundation. Finally, the constellation *Msḫtyw* from the tomb of Rameses VI seems to have Osirian overtones in the link with Busiris (**map 4**) and the tomb text describes ‘the Water of his Gods which comes forth from Osiris’ (Piankoff and Drioton 1942, 96).

Later Osirian connections are made more explicit by equating the Leg in the constellation with the Leg of Osiris. The source of the Nile was said to be at the first cataract, at Bigah (**maps 2 and 8**), where the river surged forth from the calf (or Lower Leg) of Osiris, the divine relic preserved there (Kees 1961, 328). Isis protects the leg of Osiris which was worshipped in the form of an obelisk. A bas-relief in the temple adjoining the Nilometer on the nearby island of Philae (**maps 2 and 8**) shows the

sources of the Nile metaphorically. The inscription at Philae describes the Nile from the heavenly Duat. A similar underworld and heavenly Nile is described in the Hymn to the Aten in the tomb of Ay (Davies 1908, 30).

Flint is not directly associated with the Inundation, but indirectly through flint's more direct connection with *bi3*, Seth, the vigil of Osiris and *Msḫtyw*. Thus flint-Inundation is not a key metaphor (Ortner 1973; Turner 1967, 50)[64]. Perhaps with less claim to relevance, the Inundation was a time when minerals, including flint, were presented as an expression of the return of the raging mother, and a time when the enemies of Re were overthrown, often using a weapon of flint. Like water, flint also came from the wadis (introduced in this thesis, **4.2.5**).

6.3.2.6 THE FOUR MSTYW

In a text describing heavenly bodies in Ptolemaic Dendera (**map 6**), the four *Mstyw*, depicted with ram's heads, are made of flint, gold and silver (Dendera X, 259, 8; Cauville 1997 I, 138–139; Cauville *et al*. 1997 I, 259; Cauville *et al*. 1997 II, pl. 115 and pl. 144). Clearly this is the Great Bear; these entities are listed next to a description of Isis-Theoris in her form as the hippopotamus in the sky. Additionally, the description of the constellation in the tomb of Rameses VI includes four spirits of the north who, like the four *Mstyw*, accompany the day barque of Re. Piankoff (Piankoff and Drioton 1942, 24) discusses parallels to the Four *b3w* in the description of the 11th hour at Edfu (**maps 2 and 8**; Edfu III, 227) and also the Temple of Deir el-Bahri (**map 7**; Naville and Clarke 1894–1908, pl.114). These he equates with the four Imperishables of the *PT* (1457, 221–260, 316, 1458, 1978 De Buck 1935 II, 147). In *BD* 17 the Four Children of Horus are guardians of the Bull's leg in the northern sky (Piankoff and Drioton 1942, 24; te Velde 1977, 87; Allen 1974, 29). As Wainwright (1932b, 163–164; 1963, 8) states, the Four Children of Horus, the Imperishables, are associated with Letopolis, a place linked with storms, flint and meteoric iron.

Mythologically, the Four Sons of Horus have a clear funerary role guarding the coffin of Osiris. They would thus be present in the northern sky, if the Great Bear indeed represents the vigil of Osiris.

6.3.2.7 OSIRIAN CHAPELS

At Dendera texts citing flint are clustered in a particular area of the temple, around and in the Osirian Chapels through which, Derchain (1990) has suggested, cult statues

[64] I use the term key metaphor loosely here. For an explanation see **2.2.2.1**.

were manufactured and animated and taken to the rooftop chapels for rebirth. All these texts are discussed elsewhere in this thesis and are either lists of amulets or execration rites. As well as the examples from the 'goldsmith's workshops', this cluster includes the two lists of minerals presented at Khoiak (Dendera IV pl. 36 col. 49 and Dendera VI pl. 49 col. 142 both in Mariette 1870); the amulet table (Mariette 1870 IV, pl. 87), and the so-called 'Treasury' (Chassinat 1935 IV, 177). Others are also in Osirian Chapels: Dendera X, 234 (Cauville 1997 I, 123, Cauville *et al*. 1997 I, 234 Cauville *et al*. 1997, pl. 107, pl. 136); Dendera X, 258 (Cauville 1997 I, 138; Cauville *et al*. 1997 I, 258.11–12; Cauville *et al*. 1997 II, pls.115, 144); Dendera X, 259, 7–8 (Cauville 1997 I, 139; Cauville 1997 II, 128; Cauville *et al*. 1997 I, 259, Cauville *et al*. 1997 II, pls.115, 144).

6.4 STORM GODS

Seth, Min and Thoth have been described as storm gods (Wainwright 1963). Storms are certainly associated with the northern sky: so, for example, in the *Pyramid Texts* storms are associated with the king's ascent to the Imperishable Stars. However, in the New Kingdom *Contendings of Horus and Seth*, it is said that Seth's voice would be heard in the thunder while he travelled with Re (Lichtheim 1976, 222). The connection between flint and storms is well known ethnographically, particularly in relation to thunderbolts, but is it a feature of Egyptian religion? Wainwright (1932; 1963) suggests it is implied, for example in *BD* 95 and possibly 125.

The flint-storm link is unsurprising given that the thunder origin of flint prevalent in several cultures. Additionally, there is evidence that by the 4th century AD, the Egyptians believed stones could come from meteors. In Chapter 22, Book XX of his *Roman History* Ammianus Marcellinus discusses Egypt, and states that Anaxagoras foretold a 'rain of stones' (trans. Rolfe, 1935–1950). Nevertheless, Egyptian textual evidence is indirect, for example describing storm gods holding flint knives, particularly in stormy situations. A search for a link between flint and the 'storm gods' themselves shows some results for Seth and Thoth, though I have found none for Min.

The fiery and sound traits of flint presumably provide the connection between flint and storms. Additionally, as seen above, flint is connected to meteoric iron, *biȝ*. The heavenly well in the sky, presumably the source of storm rain, is also called *biȝ*.

6.4.1 MIN

Wainwright (1932; 1963) interpreted Min as a thunder god of storms, meteors and flint. Min of Gebtu (Koptos; **map 6**) was a deity of nomads, hunters, miners and travellers and connected with the archeress goddess, Neith. He was a prospector of the wonders (*bi3*) of Punt and the eastern desert (Yoyotte 1952). While the thunder, mining, desert, *bi3* and emblem certainly might suggest a flinty affiliation, I have found no evidence.

However, as Aufrère (1998) points out, Pan, Apollo and Min were closely related. Edfu (**maps 2 and 8**) was called Apollinopolis in the Graeco-Roman Period, and Horus of Edfu was associated with Apollo. This enhances the flinty connections of Horus of Edfu (discussed above) and explains the many flint references at Edfu, a town well situated for mining. As Aufrère (1998, 9) also states, the mining connections of Edfu are built upon its close links to desert wadis: hence, we would also expect snake and lion references.

6.4.2 THOTH AND SETH

Thoth and Seth are cosmologically linked, so much so that one is said to have come forth from the other in flinty form. Both also have their own flinty connections and it is these with which I begin.

In the *Pyramid Texts* Thoth is one of the most important helpers of the deceased and an enemy of the forces of chaos (Meurer 2002, 177–180). Thoth-Re is *sḥtp nsrt* and connected with the uraeus (Aufrère 1991, 258). In *CT* 691 Thoth is firmly situated in the northern sky but in other texts is closely connected with solar Re (Bleeker 1973, 119–121).

That Thoth has a predilection toward flint is borne out in text, firstly through his association with the word *mds* (introduced in this thesis, **2.3.2.3, page 61**) and secondly by his links with flint knives. He also has more general knife links in the Ptolemaic Period. Wilson (1997, 288) suggests an association of Thoth (and also Horus) with the *wḏ3t* knife.

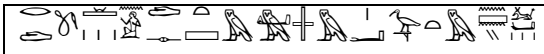
In the *Pyramid Texts*, Thoth in particular uses the *ds* knife (Midant-Reynes 1981, 40).

PT Utterance 477 (962) reads:


dm ds.k ḏḥwty nšm mds
‘Sharpen your knife, O Thoth, which is keen and cutting….’
(Faulkner’s translation 1969, 165)

Thoth’s association with the knife also appears in 1927 (66A), 1999 (674). In these instances the knife is connected with the rebirth of the king, either as a tool of rebirth or of protection.

This link with the knife continues. *BD* 95, 4 is cited in 7 versions by Naville (1886 II, 213.3) of which one version, Papyrus Berlin 3002, uses the stone determinative for knife:


rwḏ.i n.i ds imy ˁ ḏḥwti m nšni
‘I steady the knife in the hand of Thoth in storms’
(Allen’s translation 1974, 77)

This is the same spell as *CT* 555 (Buck 1935 VI, 156a) where the knife section transliterates as *ds m ds* or *ds mds* and the complete phrase is translated by Faulkner (1977, 166) as ‘I have made the sharp knife which is in the hand of Thoth strong in him who rages'. In the *Coffin Texts* there is no stone determinative.

The Sanctuary of Thoth is also flinty. Middle Kingdom *Papyrus Westcar* (Papyrus Berlin 3033) 9, 5 is translated ‘There is a chest of flint in the building called ‘inventory’ in On.’ In the chest is the number of the secret chambers in the sanctuary of Thoth (Gardiner 1925). This flintiness may refer to its protective qualities. Aufrère (1991, 565 and 568 footnote 48) interprets the flint connection as invoking eternity and durability. Alternatively, the Sanctuary may be flinty simply because of its links with Thoth. However, the coffin of *Iqr* from Gebelein, which does not appear to be linked with Thoth, also shows a flint shrine (*CT* 652, discussed by Hornung 1974).

There is more oblique but convincing evidence supporting Thoth’s flint connections. According to *BD* 134 (e.g. 18th Dynasty manuscript British Museum EA 9900) Thoth is titled ‘son of the stone’ *sꜣ-ỉnr*, (Kees 1925, 14) though, as Kees states, the word *ỉnr* could be used to mean eggshell and refer to his birth and ibis form.

In the Ptolemaic temple of Hibis (**map 3**), Thoth is described as *nb-ds* 'Lord of the flint knives,' written with the stone determinative (Davies 1953, pl. 27). Finally, at Dendera (**map 6**), a text recommends flint as a material for a Thoth amulet (Mariette 1870, pl. 87).

Archaeological evidence linking Thoth with flint is limited to stelae from Deir el-Medina (**map 7**) containing flint nodules (**5.2.2.2**).

Seth too can be a helper of Re and also uses flint. As stated above, in the New Kingdom Harris Magical Papyrus Apophis is killed with a *mds* spear: this is wielded by Seth in parallel to Seth killing the flint snake in *BD* 108. However, in Late Period texts Seth is the archetypal enemy of order and can be defeated with a flint knife.

At the Festival of Edfu (**maps 2 and 8**) the ritual 'trampling of the fish' (the fish are usually said to represent Seth) employed a flint *sf* knife (Alliot 1949–1954, 525; Meeks 1996, 181). The Book of the *Triumph over Seth*, extant in British Museum EA10525 and Papyrus Louvre 3129 (Schott 1929), contain several spells against Seth which employ the flint knife.

In an Osirian Chapel at Dendera (Mariette 1870 IV, pl. 74 a, col. 32) an execration rite against Seth uses a black flint knife. In another Osirian Chapel (Dendera X, 299; Cauville 1997 I, 161; Cauville *et al.* 1997 I, 299.5; Cauville *et al.* 1997 II, pl. 172) a red clay statue of Seth is dismembered using a black knife. In their use of black thread, the harpoon, flint knife and fire these texts parallel the rites in Papyrus Bremner-Rhind 26, 4 against Apophis.

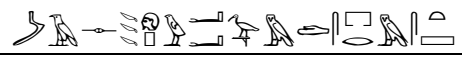
Wainwright (1963) and Zandee (1963) discuss Seth the storm god but nowhere are Seth, storms and flint directly linked. Seth's link with flint may be related to his other connections, for example his links with meteoric iron and the northern sky. Seth can also be solar and in *BD* 108 Seth defeats the Apophis snake at midday. We have seen the connection between arrows, flint and Re. Seth can be seen embracing the king Tuthmosis III as he draws his bow at his heb-sed festival (at the Temple of Amun at Karnak (**map 7**); Erman 1894 (trans. Tirard), 282). Seth's weapon-like tail resembles an arrow or macehead (Borchardt 1909; MacDonald 2000, 78). His desert and fire correlations possibly also bring him within the flinty realm.

Seth's links with Thoth may also make him flinty. There is an affinity between Seth, in his role as helper of Re, and Thoth (Griffiths 1980, 34). Thoth and Seth are alternative opponents of the snake who strikes against Re in his sun boat. Both Seth and Thoth (Assmann 1995, 52–53) use a knife, or sometimes the Thirty Cubits spear (which may be of flint), against this enemy.

Either Thoth carries Seth's flint knife or himself comes forth from Seth in flint form. From the New Kingdom onward there are strong hints that Thoth is also associated with the uraeus, which, as we have seen is flinty in itself. We have already noted that in the *Pyramid Texts* Thoth is associated with the flint knife which is connected with the rebirth of the king. *PT* 665 (1906) can be translated: 'Thoth comes to you with the knife which came forth from Seth….' (Faulkner 1969, 275). Thoth carries the knife which came forth from Seth to the risen king. This knife may allude to the uraeus, which likewise came forth from Seth.

19th Dynasty Chester Beatty Papyrus IX (Gardiner 1935, 107) as translated by Gardiner reads: 'O Thoth who came forth from the forehead! [O] Thoth moon in the sky!….'.

PT 674 (1999c) also connects flint, Seth and Thoth:


mꜣsw tpw ʿwy ḏḥwti m ds pr m Stš
'The *mꜣs* upon the arms of Thoth are of flint which came forth from Seth'

Alternatively, Faulkner (1969, 288) translates *mꜣsw* as 'spines' and *ds* as 'sharp'. Griffiths (1980, 34) translates this as 'the cutting one who issued forth from Seth'. Kees (1925) translates *mꜣs* as 'knife' citing *PT* 1560c where Thoth's feathers upon his shoulders are described as knives. It is unclear if Thoth, or simply his arms are of flint, or indeed whether they are sharp. Meurer (2002, 178–179) equates the spines with the claws of the ibis, Thoth's avatar. The claw of the ibis is elsewhere associated with a knife. Additionally, fingernails (**6.2.1.1, page 226**) and wings (**6.7.3**) can be associated with flint. Interestingly Goebs (2008, 144-145 footnote 361) suggests *mꜣsw* may be connected with, or a miswriting for, *mjswt* (the white crown which comes forth from Seth and which may be the moon itself, and/or the uraeus and the Eye of Horus, all linked by their luminous potential).

We find further references to the uraeus. *BD* 149 l (18th Dynasty Papyrus Burton, British Museum EA9900; Naville 1886 II, 416.70) describes:


wr ḥkꜣw m ds pr m ***S****tš*
'Great Of Magic, the sharp one (*mds*) which came forth from Seth'

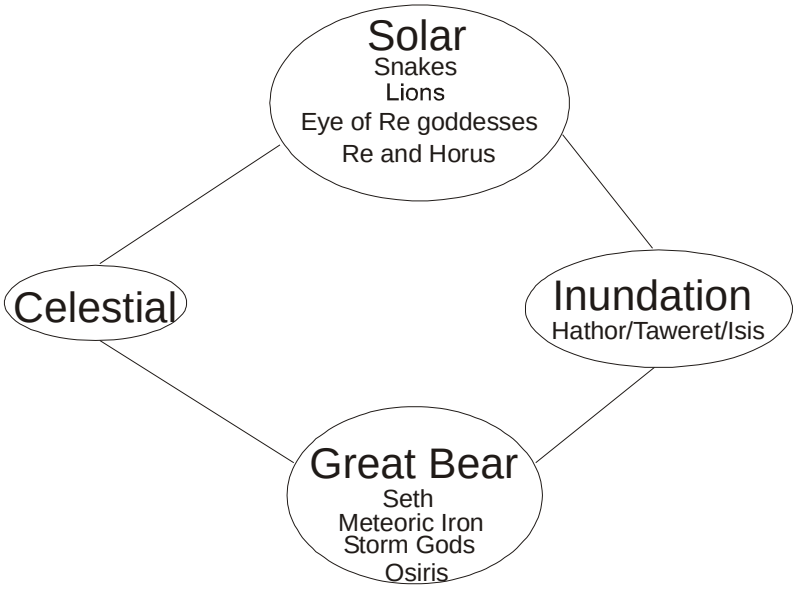
Allen (1974, 145) translates this as 'the keen one who escaped from Suty'. The title 'Great of Magic' can refer to a cobra goddess or the uraeus (Griffiths 1980, 38;

Johnson 1990, 77) or a knife (Aufrère 1983, 15 footnote 124) but is also a title borne by Thoth. The flint *mds* knife, the crescentic lunar avenging knife (Derchain 1962, 41), is also the uraeus snake, the Eye of Horus, or flame and is associated with Thoth (**2.3.2.3**; Kees 1925; 1965). As we have also seen the snake/uraeus has flinty associations. In fact, the Ptolemaic P. Turin Museo Egizio 1791, *BD* 149, col. 45 (Lepsius 1842, 72 and Rachewiltz 1958, 84, 86) clearly refers to the uraeus. It may be translated: 'I am the Eye of Horus, Great of Magic of flint, which came forth from Seth'.

Other entities which 'come forth from Seth' include snakes and fire, as one would expect from the conceptual juxtapositions of flint. In the *Pyramid Text* Utterance 683 line 2047 we read: 'this is the viper which came forth from Re, this is the uraeus which came forth from Seth' (Faulkner 1969). Indeed in Late Period texts, Seth is said to have emerged from the body of Nut with the uraeus on his head (Papyrus Louvre 3129 and British Museum EA10252; Schott 1929 56–57). Kees (1925) delivers a strong argument for the equation of the 'Eye' which originated from Seth with the *ds* or *mds* knife. Goebs (1998, 451; 2008, 142–144) in turn links the Eye with the white crown.

6.5 THE CELESTIAL SUMMARISED

Flint is related to the solar and northern sky. As the link between flint and the celestial is well known cross-culturally, we may suspect that this is due to the physicality of the material, perhaps its luminosity (**4.3.1**). However, it is not quite so simple. One might say that, while the locales are linked with flint, it is their function, not geographical position which is important for their flinty links. Flint is related to the celestial indirectly through celestial gods, but also directly through the solar and northern sky. The two groups are linked by the Inundation and goddesses such as Isis who are connected with both the Great Bear and the solar. The constellations of ideas could be simplified thus:



There are perhaps two other qualities that are particularly salient in this grouping. If we consider the areas of Egyptian cosmology in which both the Great Bear and the solar are particularly pertinent, they are transformation and maintenance of order. A third attribute that flint seems to embody is perhaps less distinctly related to the celestial: that of protection.

The solar aspect of regeneration in Egyptian cosmology and the wish of the deceased, particularly in the *Pyramid Texts*, to join the Imperishable Ones of the northern sky have for long been accepted in Egyptology. The concept of the defeat of the forces of chaos, the enforcement of maat (order/justice, etc.) is likewise accepted as a function of the sun-god Re. A similar idea may be invoked for the northern sky.

The solar destruction of Apophis (e.g. *BD* 108) mirrors the defeat of Seth in the northern sky. The 'Night of the Great Contest' is specifically alluded to in the text in the tomb of Rameses VI. Desroches-Noblecourt and Kuentz (1968, 117–124) outline the link between the Inundation and the celebration of the defeat of the enemies of Re. Bremner-Rhind 27, 22 (Faulkner 1933, 45; 1937, 173) asserts that the constellation *Msḫtyw* overturns Apophis. A passage from Papyrus Leiden I 348 (te Velde 1977, 86) suggests that the conflict between Horus and Seth takes place in the northern sky. The northern sky constellations bear resemblance to the theme of the destruction of Apophis as mentioned in the *The Book of the Amduat.* Here a figure called *ʿnw* can be seen in the constellation, spearing Seth. Like Horus, he is sometimes hawk-headed. The foreleg of Seth is tethered, Selket stands in attendance, while Isis holds the post. The killing of Apophis, like the constellation, is a threat overcome before rebirth can continue. The whole is also related to the funerary rites involving the cutting of the

foreleg of the bull and its presentation to the two mooring-posts (Willems 1996, 115–116).

6.6 NON-CELESTIAL

6.6.1 AFTERLIFE REALMS

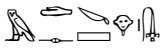
Flint appears in various versions of the afterlife, as the high walls of flint in Rosetau (**6.7.3**). There are other more oblique citings of it in afterlife spheres. For example in the Ptolemaic P. Turin Museo Egizio 1791 (Lepsius 1842, pl. 41 and Rachewiltz 1958, 56) there is a depiction of the afterlife Field of Reeds. Four places are identified. One place is depicted by the knife form, another by *ḥtp ds*, written without the stone determinative in both instances.

6.6.2 DOORKEEPERS

Wilson (1997, 481) points out there are a number of *mds*-guardians of the gates of the Underworld, the word enhancing their fierce nature. Several are also particoloured or ophidian. Here only those where the stone determinative alludes to an explicit stony connection are considered.

In the Papyrus of Iouiya (Cairo 51189, Naville 1908, pl. 19, 20) the 4th gate, Spell 144 has the character *mds ḥr* (translated by Allen as 'Keen of Face').

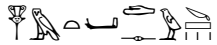
The announcer of the 6th Gate, Spell 144 is *mds ḥr* (Naville 1886 II, 369.) and 18th Dynasty Papyrus Brockelhurst II employs the stone determinative (Naville 1886):



Likewise, in the same Spell, the Keeper of the 7th Gate is described as *mds* which in one version, again Papyrus Brockelhurst II, carries the stone determinative (Naville 1886 II, 369). Allen (1974) translates the full phrase as 'He who is at the 7th gate is the Keenest of Them.'

Elsewhere doorkeepers are described as employing flint. Spell 145 v 21st Portal has a character called 'She who Sharpens Flint to Speak for Her' (*dmt ds r mdt n.s*). I give Allen's translation (1974, 125, 276) based upon Papyrus British Museum EA10554. A stone determinative is apparent in the 21st Dynasty Greenfield Papyrus facsimile (Budge 1912b, pl. 58). The alternative version 'She who Sharpens Flint To Speak to Them' (*dmt dsw r mdt n.sn*) is based on the 18th Dynasty Papyrus of Iouiya (Allen 1974, 125, 276).

Spell 146, a version of 145, introduces the Keeper of the 4th Portal as the lady ‘Mighty of Knives’. Naville (1886 II, 371.9, illustrated in I) gives seven versions of which the 19th–20th Dynasty papyrus Leyden T6 of *ḥr-m-ȝḫ-bỉt*, has the stone determinative making the probable translation ‘Mighty of Flint Knives’. This determinative is also present in the 21st Dynasty *Book of the Dead* of Hori (Berman 1999, 370–371):


sḫmt(i) dsw
‘Mighty of flint knives’

The keeper of the 4th portal decorating the 19th Dynasty tomb of Sennedjem has the same hieroglyphic combination (Bruyère 1959, 58–59).

Spell 146, the 11th portal, gives a hint of flintiness. Naville (1886 II, 373.28) gives 5 versions of which only one has the stone determinative, Leyden T6, the Papyrus of *ḥr-m-ȝḫ-bỉt* :


wḥmt dsw
‘repeating of flint knives’

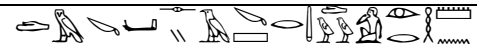
Allen (1974) translates this: ‘She who cuts repeatedly’ and continues ‘who burns rebels.’ Wilson (1997, 1207) dates the use of *ds* as a verb during the Late or Graeco-Roman Period.

In Spell 146, the 14th Portal has the character:


nbt dsw
‘Lady of the flint knife’

See Naville 1886 I, CLXI (Spell 146, 35). Of Naville’s five versions (Naville 1886 II, 373.35), one, Papyrus Leyden T6 (Naville’s Lc), has *dsw* with the stone determinative. The other versions read ‘Lady of Wrath,’ (*nbt ḏnḏn*).

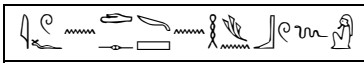
In Spell 146, the 21st Portal appears in Naville (1886 II, 374.57) in two versions of which one, Leyden T6 has the section:


dmt dsyꜣ r mdww r ỉr ḥmn
‘The Flint Knife speaks against a number’
(translated by Allen 1974, 136)

I give Allen’s (1974, 136) translation more fully: ‘To be said on arrival at the 21st portal by Osiris N.: She Who Sharpens (Flint) To Speak (against One Who Does) Slaughter, (she whose flames descend)….’.

Perhaps these guardians are related to ‘The Lord of The Knife’ and the ‘Guardian of the Two Knives’ of Edfu (**maps 2 and 8**; Goyon 1985, 69–71; Aufrère 1991, 564) the names of which are not written with the stone determinative. Interestingly, however, the Edfu names may be written with the determinative of a lion-headed god.

One explanation for the flinty nature of these door-keepers could relate to their protective and dangerous nature. They are not here said to be a specific threat to the deceased. There are however, exceptions. Flint knives may also belong to threatening demons with no known celestial connections, as in the demotic Papyrus Rylands IX, ‘The Petition of Petêse in the Reign of Darius’ from the John Rylands Library Manchester, in a hieratic passage:


ỉw.f n ḏs n ḥnbw
‘he shall belong to the knife of the slaughterers’
(Griffith 1909 II, pl. 4 and III, 250; Morschauser 1991, 109)

This may alternatively be translated as ‘the knife of the god henebu’ (Vittmann 1998 II, 581).

This is certainly a threat to the deceased and one which at first glance is out of place in the general pattern of the protective and transformational character of the flint knife used against the enemies of Re.

Additionally in *BD* 17 (Naville 1886, 68.92; Allen 1974, 31) 2 versions, both of the 18th Dynasty, give the stone determinative in the phrase:

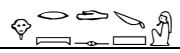

nn ḥꜣb dsw.sn ỉm.ỉ nn ꜥḳ.ỉ r ỉꜣṯw.sn

Allen (1974, 31) translates this as: ‘Their knives shall not pierce me’ adding ‘I shall not enter their place of execution’. A different version is found in the Saite papyrus of *Iʿḥ-n-ts-nḫt* (Verhoeven 1993, 17 col. 11, line 10 (part 1, 104; part 2, 15)), where *mds*, with the stone determinative is translated as ‘sharp’.

6.6.3 JACKALS

Jackals pull the sun god through the underworld. Jackals are also of the transitional zone between one world and the next (Assmann 2001, 82). Thus it is difficult to place them as either of the solar or night sky. In the instances now cited they may relate to doorkeepers or act as tools of the solar Re.

In the Ptolemaic temple of Hibis in the El Khargeh Oasis (**map 3**), a jackal-headed god carrying two knives is labelled (Bull and Hall 1953, pl. 10):


ḥry-ds
‘he who is over his flint knife’

This may not necessarily be Anubis but another jackal-headed deity. The deity is in a doorway, perhaps alluding to the flinty doorkeepers discussed above.

6.6.3.1 ANUBIS

Anubis appears to have flinty connections.

In Papyrus Jumilhac XVIII, 7 Anubis commands the *ḫꜣtyw* and *šmꜣyw*, demons who are carrying flint knives, against the enemies of Re (Vandier 1962, 130, pl.18). These disease demons are also associated with Sekhmet (Wilson 1997, 705–706; 1008–1009), who, as we have seen, is more usually associated with the flint knife. The demons can also be personified as arrows (Germond 1979). The pertinent section is:


ḫꜣtyw šmꜣyw ỉmyw ds.sn
‘*ḫꜣtyw* and *šmꜣyw* with their flint knives’

However, elsewhere in the document (Papyrus Jumilhac pl. 18, 19), it is Anubis himself, in ophidian form, who uses a flint knife (Vandier 1962, 125, pl. 13):

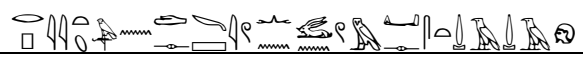

dmi̯wty n ḏs m ꜥwy.f
‘two knives of flint in his hands’

In both cases, Anubis is an instrument of Re, perhaps emphasised in the latter by his snake form.

There are two possible, perhaps related, explanations, as to why Anubis should be associated with flint knives; either because of his role as a ‘divine midwife’ or because of his transitional role as a guardian of a gateway to Rosetau (DuQuesne 1991). Both are transformative (**6.7.1**).

6.6.4. ISIS PILLAR

In the *Contendings of Horus and Seth*, Isis is directly linked with flint, though here one can claim neither a night sky nor solar connection. She is transformed into a block of the material without a head (Horus and Seth 9,10; Gardiner 1932; Lefebvre 1948, 194; Wente 1972). I give Gardiner’s transcription:


rpyt n ḏs i̯w nn wnw m di̯.s(st) ḏ3ḏ3
‘a female statue of flint which did not have a head’

The description of the headless statue is intriguing and its meaning unclear. It could represent a fusion of ideas. In a parallel story, recounted in Papyrus Sallier IV, Isis’ head is replaced by that of a cow. Broze (1996, 234–236) and others have stated that this cow’s head links the headless Isis statue with Hathor, who takes cow form in her nurturing aspect. Aufrère (1991, 122–130) draws a parallel between these stories and that of Medusa and also suggests that here Isis may be a form of Hathor who loses her moon head (also associated with Sothis). The pillar statue into which Isis is transformed may be linked with the worship of Hathor in this form and the reconnection of her head linked with the calendrical cycle and the Inundation. Aufrère (1991, 122–130) draws attention to the worship of Hathor at Kom Abu Billo (**map 4**), where it seems worshippers would celebrate the return of the Hathor and a pillar statue connected with lunar Hathor. *Rpyt* perhaps represents a statue pillar. At Philae (**maps 2 and 8**) Hathor, in her role as the distant goddess, is associated with the female djed pillar (Inconnu-Bocquillon 2001, 80, 101, 319).

The story may also be paralleled with that of the flinty Apophis in *BD* 108. Seth annihilates his 'evil eye' (Borghouts 1973) and Isis too loses her potentially dangerous flint head/eye and becomes pacified Hathor. The 'flint head' may even allude to the uraeus (flint and the uraeus are both said to come forth from Seth and fiery snake goddesses associated with flint may take the form of the uraeus).

6.7 GENERAL THEMES

Text suggests three main themes to flint's importance: creation/transformation, maintenance of order and protection. More tentatively a fourth may be seen in the sacramental nature of the flint knife.

6.7.1 CREATIONAL/TRANSFORMATIVE

Creational/transformative aspects of lithics, particularly obsidian, feature in societies where the medium is embedded. For example among the Yucatec Maya (Brown 1995) obsidian blades were linked with concepts of birth or regeneration, with the act of flaking paralleled to giving birth. There are hints that this was also so for Egypt. I first reiterate the evidence.

It might first appear that flint was anything but creational, given its power to destroy. However, hostile acts involving flint are always against 'enemies'. In only two instances out of many, does the flint act against the deceased (**6.6.2**). Arguably, it was considered necessary for destruction of enemies to precede creation (suggested elsewhere for Egyptian cosmology, for example for the 21st Dynasty creational mound scenes where Ammut is included).

Creational/transformative aspects of flint are evident in:

i) The defeat of hostile forces (**this chapter, passim**) some taking snake form.

ii) The solar (**6.2**).

iii) Creational aspects of the Lake of Knives/Fire (**above, 6.3.2.3**).

iv) Spitting (**4.2.9**, **6.2.1.1**, **6.2.2.3**).

v) The Imperishable stars of the northern sky (**above, 6.3.2.3**).

vi) The vigil of Osiris (**above, 6.3.2**).

vii) Anubis as divine midwife or guardian of a gateway between this world and the next (**above, 6.6.3.1**).

viii) Doorkeepers (**above, 6.6.2**).

ix) The creational colour and luminosity of flint (**4.3.1**).

x) The association with the primeval, a creational time of the gods (**4.2.4, page 123**).

xi) Execration rites and ritual cattle slaughter (this thesis, 5).
xii) Spall production (**4.2.9**)
xiii) Use of natural shaped nodules (**5.2**).
xiv) Manufacture of Early Dynastic and Old Kingdom blades especially for the grave (**5.2.4.5**).

The placing of knapped flint from the same core in graves could derive from ideas of the transformational properties of reduction. As stated in **Chapter 5**, there is archaeological evidence for defleshing during the Early Dynastic, though its extent is debated. Flesh may have been removed from the body to reveal the luminous bones, in the same way that the knapping of flint is a reductive strategy revealing luminosity beneath a matt cortex. Certainly it has been suggested that the 'Cannibal Hymn' of the *Pyramid Texts* demonstrates the transformative nature of breaking down by dismembering and cooking, whether a real or metaphorical act, of the king's body (Eyre 2002).

Additional evidence is now discussed.

The Pyramid Texts

The word *ꜥḥꜥ* is often associated with rebirth. PT 1070 (Faulkner 1969, 177; Sethe 1969, 92) reads *ꜥḥꜥ m ds.i* 'Stand up by means of my knife', presumably a flint knife. However, there is an alternative explanation. Faulkner (1969, 177) suggests that the foe is commanded to stand by the prick of the king's knife. Elsewhere in the Pyramid Texts Thoth carries a knife which is associated with the rebirth of the dead king (**6.4.2**).

Flint and cult statues

Flint is linked to artefact creation. Many tools were manufactured from flint (**Appendix 1**) and flint was essential for the cutting of hard stones until the 26th Dynasty (Stocks 1988; Devaux 2000; Stocks 2003, 78–79). Only flint is capable of cutting all igneous stones (Stocks 2003, 82). Furthermore, the knife symbol designated sculptors, who were not just craftsmen, but had duties overlapping with those of priests (Meskell 2004, 256). The chief priest of Ptah had the epithet 'greatest of artificers' (Davis 1983, 132–133). The act of sculpting a statue was designated *ms*, which also means to 'give birth' and a sculptor was 'he who brings to life'. The use of the "opening of the mouth" ceremony upon statues, to animate them, or upon the human dead to revive them further expands the metaphor.

Reborn dead and cult statues were similarly treated. Precious metals and costly stones were used to resurrect Osiris (Zecchi 1996, 121). It is possible that flint also had this purpose, as it is certainly listed with semiprecious stones in the 'goldsmith's workshop' at Dendera (**map 6**; Dendera VIII, 141; Brugsch 1883 VI, 1401; Chassinat and Daumas 1978 VIII, 141), where Derchain (1990) suggests that statues of gods were animated through stones.

The practice of mummification, discussed below, had the purpose of making the deceased like a cult statue. This, together with the creational role of flint, may have enhanced its appropriateness here. Similarly, the *pšs-kf* was used in the "opening of the mouth" to bring alive the deceased and statues, and it is sometimes claimed the ceremony was first conducted on statues.

Finally, in continuing the discussion of creational role of flint, iconographic and textual evidence suggests that flint was used in transitional rituals of human life-death such as circumcision, embalming and the "opening of the mouth" ceremony. It is noticeable that priests enacted these activities, suggesting that the Egyptians themselves considered these activities as 'ritual' (**2.1.1**).

6.7.1.1 CIRCUMCISION

Evidence for male circumcision in Egypt is largely textual and iconographic. The 'ritual' nature of the act, confirms it as part of the ideology of ancient Egypt (**2.2.1.1**) and the act appears creational. However, there is some argument as to how widespread the practice was and whether or not flint was actually involved.

Janssen and Janssen (1990, 90–98), believe circumcision was practised upon boys going into puberty. However, some frequently cited evidence, notable the 'circumcision scene' in the Old Kingdom tomb of Ankhmahor, can be interpreted as a scene of ritual cleansing (Grunert 2002), perhaps including shaving[65]. The depiction carries the title *sbt*. That this word means 'to circumcise' derives from similarity to the Coptic. Roth (1991) has discussed whether *sbt* refers to the action taking place, or to the circumcised *hem-ka* priest carrying out a shaving ritual. Alternatively, circumcision may have been executed by a funerary (*hem-ka*) priest involved in 'life crossroads' rituals. Spigelman (1997, 94) is quite clear that this is not shaving, as shaving appears in the tomb of Niankhkhnum and Khnumhotep and is clearly labelled (*shaq*) and the knife in the tomb of Ankhmahor is applied to the tip of the penis. Additionally, the fact that one of the instructions in Ankhmahor's tomb states 'Hold him fast! Do not let him

[65] See also de Wit (1972) and Ghalioungui (1973).

fall!' and the fact that the person upon whom the operation is applied is restrained, seems a little excessive for shaving. It is thus my belief that this is a circumcision scene.

But is this a puberty rite? Hem-ka priests are present, suggesting ritual. The First Intermediate Period stela of Uha, where Uha describes being circumcised with one hundred and twenty others (Dunham 1937, 102–104), confirms that at times this was a rite. The age of the males is not clear, however.

There are three other circumcision scenes, all from 18th Dynasty Divine Birth scenes (**glossary**), thus mythical contexts which may not apply to humans. One occurs in the 'Birth Chamber' of the Luxor Temple (**maps 1, 3 and 7**; Janssen and Janssen 1990, 92, fig. 36), another in the Middle Colonnade of the Temple of Hatshepsut at Deir el-Bahri (**map 7**), and a third in the precinct of Mut-en-Asheru at Karnak (**map 7**; illustration in Spigelman 1997, fig. 1). These are difficult to interpret, but the sidelock of youth designates boys in these scenes.

Strabo in his *Geography* said of the Egyptians: "They circumcise the males, as also the females, as is the custom also among the Jews, who are of Egyptian origin…." (Book XVIII). Additionally, wooden phallic votive offerings to Hathor at Deir el-Bahri (**map 7**) are circumcised, as are depictions of ithyphallic gods, though this could be due to an 'iconographic convention' (Robins 1994, 233–234).

However, not all Egyptians were circumcised. For example, X-rays of the mummy of the Eighteenth Dynasty Pharaoh Ahmose (16th Century BC) proved that he was not circumcised (Harris and Weeks 1973). It is possible that his successor, Amenhotep I, also was uncircumcised (Harris and Weeks 1973, 126–130).

I thus agree with Janssen and Janssen (1990, 90–98) who argue that circumcision was a puberty rite, though not one universally practised by Egyptians. As a rite, one would expect tools and materials to be carefully selected.

Herodotus, who visited Egypt in the fifth century BC, reported that "they circumcise themselves for cleanliness sake, preferring to be clean rather than comely" (Herodotus *Histories* Book II, 37 trans. Sélincourt 1996, 143). However, there may be another reason for circumcision. A mythological reference in *BD* 17, 10 states that the sun-god Re (**glossary**) circumcised himself and that from the drops of blood two protective deities came into being (Allen 1974, 28), so that perhaps circumcision carried creational and/or prophylactic metaphor, which perhaps explains why it is depicted on the tomb wall of Ankhmahor.

It is often assumed that that circumcision was executed using flint (Strouhal 1992, 28; Shaw and Nicholson 1995, 65). There are two biblical references to flint and circumcision in Egypt. Zipporah, the wife of Moses, circumcised her son with a flint picked from the ground, while on the journey from Midian to Egypt (Exodus 4: 25). This could be an *ad hoc* use of flint, in circumstances where metal knives may have been in short supply. However, additionally, Joshua is commanded to circumcise, using flint knives, all the men who came out of Egypt (Joshua 5: 2-10). The biblical statements at least show that others linked flint and Egyptian circumcision.

Instances where the knife is portrayed: the supposed scene of circumcision in the 6th Dynasty tomb of Ankhmahor and the block from the Mut-en-Asheru Temple at Karnak (**map 7**), suggest a non-typical knife form. I believe that since in both scenes the knife is unusual and not a known metal form, it is likely that flint is depicted.

The Pre-Early Dynastic flint fishtailed knife is similar to the modern Jewish circumcision tool, though 'the distribution in graves will not support a hypothesis that they were used for this operation' (Mond and Myers 1937, 37). The *psš-kf,* being a similar shape may also be considered for this role. Egyptian *psš-kf* are found in the graves of women as well as men which suggests to Roth (1992, 114) that they are not circumcision tools. While their shape may be more suitable for male circumcision than female genital mutilation, it could be that they are merely metaphoric of the act, which may or may not have taken place on women. In Egyptian funerary rites women tended to follow the male path to rebirth, being connected with Osiris, etc., so perhaps all we are seeing is a copying of a male rite. However, an additional argument against the use of the *psš-kf,* which Roth also draws attention to, is that if we take the scenes from tomb of Ankhmahor and the precinct of Mut-en-Asheru to be depictions of circumcision, the implement depicted is not a *psš-kf.* The discussion of whether or not the *psš-kf* was actually flint is discussed below in relation to the "Opening of the mouth" ceremony. However, there is no strong case for its role in ritual circumcision.

The evidence for use of simple flint blades in circumcision is inconclusive but significant. Flint would be the ideal material for such a delicate operation, being sterile and extremely sharp.

6.7.1.2 EMBALMING

Embalming was a ritual in that it was intimately connected with the religious beliefs of the ancient Egyptians and was executed according to a prescribed and traditional manner. While not all classes of Egyptian society were embalmed, it was an ideal (as is

illustrated for example in the *Tale of Sinuhe*). Mummification aided rebirth, and thus is creational. It is associated with Osiris and makes the deceased like a cult statue; both of which we have seen, were associated with flint. In Egyptological literature it is frequently claimed that the embalming incision required a stone knife, sometimes said to be flint and at other times obsidian (Strouhal 1992, 28; Shaw and Nicholson 1995, 190; Taylor 2001, 54). This interpretation rests largely upon textual evidence of Herodotus and other late, foreign writers.

Herodotus Histories Book II states that 'Ethiopian stone' was used for the first embalming incision. Diodorus Siculus repeats Herodotus' claim (Siculus, *Library of History* Book I, 91). Herodotus seems correct on other embalming matters, including the incision on left side and use of iron hooks, thus he may be accurate in identification of materials used. 'Ethiopian stone' is sometimes translated as 'flint' (see Herodotus *Histories Book II*, 86–89 trans. Sélincourt 1972, 160), or elsewhere, obsidian. This stone is more likely to be obsidian, as there was little reason for flint to be brought from Ethiopia, but every reason to suggest Ethiopia as a source of obsidian. The refractive index of obsidian found in Egypt proves that it came from Ethiopia (Lucas 1947, 474). Aston *et al*. (2000, 46–47) summarises the debate on sources of obsidian. Obsidian would be an excellent choice for any surgery knife, though use of a sharp knife may not be quite so functionally necessary on a corpse (at least from a 20th century western perspective). Obsidian amulets placed near the incision further link embalming with obsidian. Alternatively, I wonder if the phrase 'Ethiopian stone' refers to a flint knife or blade manufactured in Ethiopia, perhaps from the south, because of the area's creational links.

What of archaeological evidence? Hassan (1943, 53–54, 69–102) claimed to have found the 'washing tent' (purification tent) of the Old Kingdom queen Khent-Khawes, which contained stone vessels, potsherds and flints. While this structure may, on the grounds of its location, and by virtue of containing a stone water channel and basin or gulley into which it empties, have been used in mummification, it may alternatively have been used for cattle butchery. In addition, given its Old Kingdom date, stone knives would be expected (unfortunately they are not illustrated in Hassan 1943).

Most of the actual embalming instruments which Janot (2000) lists are metal. The Berlin Museum once contained flint tools, said to have been used in mummification at Memphis (**map 4**), but these are now lost and their original context is unclear (Janot 2000, 162–163). Bruyère (1937, 80) noted 'silex tranchants' included

in jars containing items associated with mummification such as natron and human remains. In addition, a flint blade found in the same grave as large jars of natron at Mirgissa (**maps 2 and 9**) was similar in appearance to that used in the execration rite (Vercoutter 1975, 218). One might wonder why, if flint was used, is it not more commonly found in archaeological contexts associated with embalming? As embalming caches are common, flints might be expected. It is possible that previous excavators did not recognise informal tools as artefacts. Unretouched flints are both the sharpest flints (though soon dulled), and, to the casual observer, the least recognisable as artefacts.

Thus, evidence for the use of flint in mummification is unclear but suggestive.

6.7.1.3 THE "OPENING OF THE MOUTH"

Rites of passage (**glossary**) in many cultures employ metaphors of life and death. Death rites often include birth metaphors. In Egypt, the ritual of the "opening of the mouth" perhaps most clearly illustrates the link between the two (for arguments for this see Roth 1992, 1993; Roth and Roehrig 2002, for arguments against see Quack 2006). Even if we concur with Quack that this ceremony was not in imitation of birth, we can hardly deny that it was used in revivication of statues and the dead. As indicated above, though, the *psš-kf* (**plate 51**) is unlikely to have been used in circumcision. The use of the tool in the "opening of the mouth" ceremony is indicated in text. Text also indicates the instrument's ideologically flinty nature, though archaeological evidence of the actual instrument portrays a different story.

The *psš-kf* is usually considered to be a flint, bifurcated blade used in the "opening of the mouth" ceremony, to 'bring to life' human beings, statues, and other entities. But this is not unproblematic. Certainly it seems that an instrument of this shape was used in the ritual (van Walsem 1978, Roth 1992 and Hikade 2003, 138 summarize works linking the tool with the ceremony), but it could be argued that it was the form and not the material that was important. Indeed, its divided shape could be the metaphor for the division of the mouth, or the separation of one stage of life from another. Maybe its 'flintiness' was largely irrelevant.

The *psš-kf* may ideologically have been flint, but in reality could be manufactured from other materials. Certainly some 'special' examples seem to be of flint, e.g. from the pyramid of Mykerinus and Cheops (Reisner 1931, pl. 65a, b, e). However, the flint *psš-kf* is rare after the first Dynasty, and almost unheard of after the

6th. Van Walsem (1978, 231 cited in Roth 1992, footnote 2) records only one *psš-kf* after the 6th Dynasty.

It could be speculated that the manufacture of blades was executed as a creational act near the grave (**5.2.4.6**). The use of the *psš-kf,* literally translated as 'split flint', in funerary rites, may even have been an allusion to this act.

The belief that the *psš-kf* is ideologically of flint is largely based on its typological association with the flint fishtailed blades of Early Dynastic Egypt, but also upon the belief that *kf* was a word meaning flint. I shall examine both assumptions.

Firstly, a typological similarity does not mean functional similarity. Indeed, Hikade (2003) rejects a functional link between the two (see also **Appendix 1, 9.2**). Among the Abusir Papyri, inventory 20, (Posener-Kriéger and Cenival 196, 88, pl. 20; Posener-Kriéger 1976 I, 138, fig. 5), is a document listing temple implements. It is usually used in support of the idea that the *psš-kf* was ideologically 'flinty'. In the top row the materials are listed. Among them is *kf*. The argument that it is a material is made more certain by textual instances of *psš n kȝf* (Harris 1961, 228). I believe the strong association of *kf* used in instances where one would expect a knife suggests that it was a word used for flint, at least in the early period. Most early knives were made from flint, though there are occasional examples of other stones being used. Given the later frequency with which the *psš-kf* was made of other materials it seems the material soon ceased to be important. However, blunt flint knives were possibly associated with "opening of the mouth" in the New Kingdom (**5.2.4.7**).

If flint really was important in transitional rites, one might expect more use of the material in the "opening of the mouth" ritual. There are also a number of other tools which may at certain times have been made from flint but again archaeological evidence suggests that after the Early Dynastic Period these tools were manufactured from other materials, and thus it was clearly not the material which was important.

6.7.2 MAINTENANCE OF MAAT

The slaughter of the forces of chaos, the avenging by Horus of his father's death generates maat and parallels the creation force (Nordh 1996, 210-210). This slaughter frequently employs the flint knife, for example in ritual cattle slaughter, execration rites and in the ritual killing of Apophis and Seth. 'The victory over Apophis is less a manifestation of strength than of law and order…' (Assmann 1995, 53). Thoth is associated with the avenging flint knife. The mooring-post, too, can be seen as a

metaphor for triumph over evil (Beaux 1991). The military also use flint, particularly late in Egyptian history, perhaps because of its ideological importance as a weapon of Re, overcoming the enemies of order. Noblecourt and Kuentz (1968, 219) and Routledge (2001, 204–205 with further references) argue that the activities of the king in war were likened to a religious act in which the king was compared to the god Horus and described as *nb ỉr-ḫt* (Routledge 2001, 175, 204–205).

6.7.3 PROTECTION AND HEALING

Flint is at once protective and dangerous, though as 'the best form of defence is attack' it is hardly surprising that flint should have these polarised qualities. The protective quality of flint is particularly noticeable in its inclusion in medical papyri. The uraeus snake also had a protective function and amuletic flint was discussed in **Chapter 4**. There is also less conclusive archaeological evidence supporting flint's protective role.

Flint, particularly spalls from lithic working (*ȝst nt ds*), may be used to heal the eye. Black flint is usually suggested. Examples are given in 18th Dynasty Papyrus Ebers:

a. Ebers 375 (59, 20–21). Wreszinski (1913, 106); Deines *et al.* (1958, 42); Bardinet (1995, 307).

b. Ebers 412 (62, 14–15); Wreszinski (1913, 113); Deines *et al.* (1958, 43); cited in Aufrère (1991, 564, 568 note 20); Bardinet (1995, 311).

c. Ebers 431 (64, 4–5); Deines *et al.* (1958, 51) cited in Aufrère (1991, 564, 568 note 19); Harris (1961, 139 footnote 9); Bardinet (1995, 314).

The seemingly bizarre use of flint to cure eye ailments may recall the healing of the Eye of Re damaged by Seth and/or the defeat of the enemies of the sun-god using a flint knife[66]. Alternatively, the sharp, or durable qualities of flint may have been considered to transfer their properties to a damaged eye. In other medical papyri scraps of metal from hammering metal knives with metal hammers are used to treat ailments (Leitz 1999, 76 footnote 246).

Elsewhere in Papyrus Ebers, flint spalls are used to heal wounds:

a. Ebers 80, 2–4 (636); Wreszinski (1913, 159); Deines *et al.* (1958, 202); Bardinet (1995, 341).

[66] The use of ground minerals, specifically lead, is still used in parts of Africa and placed in the corner of the eye as a treatment, although in reality this practice has harmful effects (pers. comm. Dr. Andrew Hardy). Additionally, ground obsidian was placed in the eye by the Maya to cure cataracts and used elsewhere in ground form as a medicine (Clark 1989, 315-316).

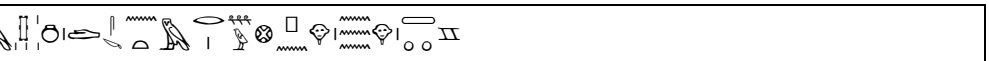
b. Ebers 83, 20–22 (673); Wreszinski (1913, 168); Deines *et al.* (1958, 26); Bardinet (1995, 346).
c. Ebers 88, 16–19 (734); Wreszinski (1913, 181); Deines *et. al*. (1958, 240); Harris (1961, 139 footnote 9); Bardinet (1995, 353).

Black flint is also used in Middle Kingdom–Second Intermediate Period Papyrus Ramesseum V, XVII, and XX (Barns 1956, pl. 22 (44) and pl. 23 (69); Deines *et al*. 1958) to ease muscles.

Flint is also used against snake bites. Papyrus Brooklyn 47.218.48 and 85 (lines 31 and 72a) of the Late Period or Early Ptolemaic describes using a flint knife against snake bites (Sauneron 1985, 27–28). Miller (1989) and others, believe the choice of flint was predicated upon its practical sterile quality rather than some magical protective essence, while Bouchet-Bert (1998) considers the choice due to the 'superstition' of the Egyptians. Perhaps both played their part; practicality and ideology need not be opposites. In the Brooklyn Papyrus it is noticeable that the snake is a manifestation of Seth (Sauneron 1985, 27) and, as shown above, flint is used elsewhere against him. In Papyrus Ebers (109, 2–11 (875)) a flint knife is used to excise a Guinea worm (Dienes *et al.* 1958, 228; Wreszinski 1913, 225), possibly because of the snake-like qualities of the worm.

The Second Beth-Shan Stela of Seti I, (I, 16, 15) was introduced above (**6.3.2.1**). Kitchen translates: 'spreading his wings (firm) as flint, and every limb as iron…..' (transcription in Kitchen 1975 I,16 ; translation in Kitchen 1993 I, 13; cited in Aufrère 1991, 565 and 568 footnote 45):

Wings, like flint, are protective, as is shown by frequent depictions of female winged goddesses protecting the deceased. Of course this is only one interpretation of the stela. The First Hittite Marriage Stela of Rameses II was also introduced above (**6.3.2.1**). In it the king compares himself to a 'wall of flint'. This idea mirrors *CT* 1072:


ỉw sn ḳ3ỉ m ỉnbw nw ḏs nt R-sṯ3w pn ḥr mw ḥr t3
'They have high walls of flint in Rosetau upon water and upon land'

Flint walls, as such, do not occur archaeologically. However, other flint structures,

possibly interpreted as protective, though again with other possible interpretations, are known. Flint structures seem to be used where flint abounds, thus are probably simply expedient. For example, Petrie found two flint and limestone conical tumuli predating the Roman Period near the 18th Dynasty town of Naqada 2 (**map 6**), in an area where flint and limestone abound (Petrie 1896, 34). Flint was used to cover graves, for example the 17th Dynasty tomb at Dendera (**map 6**; Petrie 1900b, 22). A mixture of mud and flint was used in the construction of some Meidum mastabas (**maps 3 and 4**; Petrie *et al.* 1910 III, 4; Harpur 2001, 37, 282 note 10), with flint inclusions added to the deeper fills. The mixture of mud and flint proved even more difficult for excavators to cut through than the limestone blocks of the structure.

Flint quarried as a by-product of grave digging further emphasises the link between flint and graves. It is possible that such imagery could imply eternity. Indeed eternity is generally an aspect of stone (**4.2.4**). It could also imply transformation or protection.

6.7.4 THE SACRAMENTAL KNIFE

The flint knife appears as a threat primarily toward enemies of Re and only secondly a danger to the deceased.

While the danger of the flint knife for the deceased is underplayed in text, the *ds* knife, without the flint determinative, is a more obvious threat. We must consider the role of such knives given their link with flint. Morschauser (1991, 109) states that generally the *ds* knife is ‘an instrument of torture, and often appears in an eschatological context in connection with demons who might way-lay the dead as he travels through the Netherworld’. Zandee (1960, 157) supports this.

It is possible that flint’s rare threats to the deceased are simply a characteristic of metaphoric fuzzy sets (**2.3.2.1**); not all examples following the same pattern. It is also possible that the knife was also both a threat and a means of transforming the deceased, reviving the justified dead in the same way as butchery and cannibalism is described in the *Pyramid Texts* and in the same way as has been suggested for the Lake of Fire/Knives. That is, dismemberment by flint knife is a prerequisite to rebirth. Either way, it is largely sacramental, not a simple metaphor for power. It is a real threat to the enemies of order but is a transformational tool for the blessed dead.

It is noticeable that the killing of the Apophis snake, often employing a flint knife, is executed at noon, a transformational time. The snake must be killed before

rebirth can begin. Szpakowska (2003, 31–32) discusses the liminal nature of noon, a time when the otherworld and this world are closely connected.

In support of the theory that the flint knife is not simply a destructive force, iconographic and textual representations of execution by knife are rare (Whitehouse 2002, 432). Prisoners are usually killed by a blow from a mace. Killing using a knife is more a mythological act, as in the executioner block spell, *BD* 50 (illustrated in Budge 1913, pl. 16). And, as is shown here, killing involving flint is connected in myth to sacramental killings, killings involving the restoration of order and the defeat of evil. It seems then that the flint knife is more than an instrument of simple killing, or a simple demonstration of power.

6.8 CONCLUSIONS

To some extent textual descriptions of flint mirror those of stone in general (**4.2.4**). Both are durable and associated with the perfect time of the gods; both are a creation of deities, such as the Eye of Re and of snake gods. Flint also bears many characteristics of knives in general (**4.3.10**), though flint knives are arguably less threatening and more creational. For flint there are also specific links with the fiery daughters who are the Eye of Re (rather than the pacified Hathor), the northern sky, storm gods, Osiris and metal *bi3*.

It is noticeable that textual references, specific to flint, occur in the Middle Kingdom, but are particularly prevalent from the New Kingdom. (With the possible exception of the problematic *PT* Utterance 1999, early texts do not describe specifically flint knives, through stone determinatives, or adjectival use of *ds*). Generally, as archaeological evidence for flint decreases, textual evidence increases. This may in part be a feature of the increased textual survival, or it may have other implications, perhaps a move toward explicit metaphor.

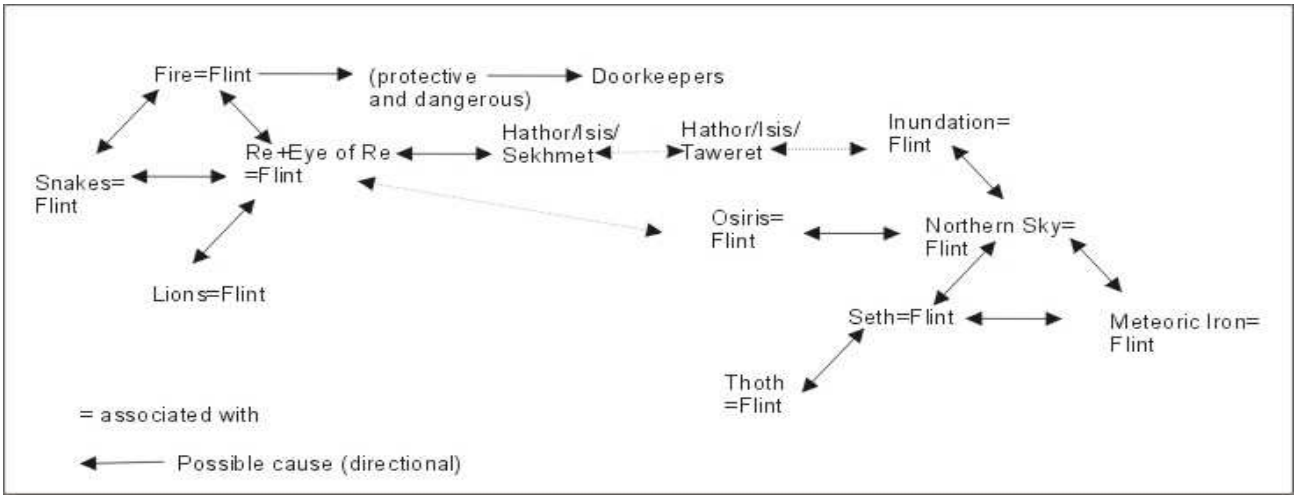
It is also noticeable that earlier texts describe flint having snake-like qualities, e.g. the flint knife can swallow and lick. However, it is nowhere stated at this date that the knife is like a snake but rather it is described as though it were a snake. By the Middle Kingdom, the snake is explicitly made of flint. This is perhaps related to the more general nature of the development of Egyptian cosmology. In the Old Kingdom gods are not depicted on tomb walls. The portrayal of the 'Other' is much more subtle and, one might say, metaphoric.

The connection with snakes is apparent throughout Egyptian history from the Early Dynastic to the Late Period. The connection with the northern sky and Osiris

begins with the *Book of the Dead* in the Middle Kingdom, though the idea may be earlier. The description of the constellation of the Great Bear, though without specifically describing the flint mooring-post, is certainly earlier, dating to the *Pyramid Texts*. It seems to continue until at least the Ptolemaic Period with the specific mention of flint. The link with storm gods is apparent in the *Pyramid Texts*. The connection between flint and fire is not at first apparent but begins in the Middle Kingdom via the link with fiery goddesses. The connection between knives and fire is evident from the 19th Dynasty where the Lake of Two Knives can substitute the Lake of Fire. Later, in the 4th Century BC Bremner-Rhind (though its archaic language here suggests an earlier prototype), we see a particularly strong connection between flint and fire.

It is evident that study of text is vital in understanding the ideology of flint. Yet, it is clear that most of the textual evidence for ideology tends to be later than archaeological evidence. Additionally, text is often unable to explain certain archaeological signposts to the ideological significance of flint, for example, the reason for breaking stone knives, or for placing heirlooms in tombs. Text can however hint at certain possibilities, though there are dangers in using text from late periods to explain the archaeology of earlier periods.

As has previously been stated, the connections here indicate a web of ideas, a web of reflexive entities, but which are causative and which resultant is difficult to ascertain. Part of the web may be simplified thus:



7. CONCLUSIONS

In this section I first return to the original research questions, discuss the main success or otherwise of the methodologies here employed and end with suggestions for future research.

7.1 RESEARCH QUESTIONS:

The original research questions were as follows:

What are the ideological components of flint in Dynastic Egypt?
Do they change through time?
Does the change appear to relate to decline in flint use?

a. do the metaphoric variations relate to the degree to which flint was embedded in society?
b. does tropic use relate to utilitarian use (is the metaphoric use in anyway related to the utilitarian or is it a separate construct)?
c. is there any evidence of a move from implicit to explicit ideology (dead to 'live' metaphors), or vice versa?

1 and 2 WHAT ARE THE IDEOLOGICAL COMPONENTS OF FLINT IN DYNASTIC EGYPT AND DO THEY CHANGE THROUGH TIME?

Certain aspects of the ideological metaphor concerning flint suggested by scholars have been confirmed and strengthened in this study. Work of previous scholars is discussed in **Chapter 1** and here summarised as: the link with fire and snakes; Seth, storms and meteoric iron, use against the enemies of Re. The use of the flint knife as a ritual butchery knife and its possible use as a tool for human sacrifice have also been considered in the past. That naturally shaped nodules from Thebes had religious significance of some kind has also been previously suggested.

None of the previously suggested aspects have been overturned in this thesis. However the thesis provides additional information on all of these areas, but also brings out new ideological areas. These may be summarised as: the link with the northern sky; the importance of white and shininess for flint. The link between the strange shaped nodules of Thebes west and the geography and religious aspects of this area; the significance of paired knives in the Early Dynastic; the importance of breakage and of the type-4 knife, are also largely new areas.

There remains in all areas a certain amount of speculation which needs further research (discussed in the final section of this chapter). Additionally, there is an obvious related problem that, as evidence for reasons behind connections is scarce, or indeed even evidence for the connections themselves is scarce, it is difficult to make any meaningful statements without comparing evidence from different chronological eras. When attempting to consider change over a long time scale, the big picture, to some extent this is inevitable. Follow up studies should endeavour to reduce this further by considering the evidence within more narrow time scales.

It is clear, however, that there are chronological changes. Previous studies, because they either concentrated upon one aspect in a short chronological timeframe, or because of the general idea that Egyptian religion was largely static, did not consider chronology.

Generally, there is an increase in the textual evidence for the ideology of flint, where it is increasingly used against the enemies of Re. There is very little archaeological evidence after the New Kingdom, at the time when textual evidence abounds.

It is only in the Early Dynastic Period that oversize, fragile and possibly curated knives are found in elite graves. Indeed, other flint artefacts appear from their physicality to have been metaphoric at this period (flint bracelets, bifacial arrowheads, etc.). In this period certain flint artefacts are associated with the elite and flint is used in ritual cattle butchery. Use of the flint knife in ritual butchery continued until the Middle Kingdom, though its exact meaning is unclear.

The early connection between flint and snakes, shown in text, is largely subtle and non-specific. From the Middle Kingdom the connection is more explicit and particular deities are named. The direct link between fire and flint is explicitly apparent in the Late Period with the Bremner-Rhind Papyrus; however, there are earlier hints in the way flint and fire are described in similar terms. Flint in connection with Re is first attested in the *Pyramid Texts*. The connection between flint and the goddesses who are the Eye of Re is first apparent in the Middle Kingdom though continues until the Ptolemaic Period.

Both Thoth and Seth have early flint connections in the *Pyramid Texts.* However, while Seth's flint connections continue, Thoth's do not seem to date later than the Middle Kingdom, except perhaps as a 'translation' of Thoth into the *wedjat* Eye, the uraeus which comes forth in flinty form from Seth. Seth's flint connection

continues, related to his role as an enemy of Re, but also as the one who gave forth the flinty uraeus.

The connection between strange shaped nodules and other emergent forms at Deir el-Medina is limited to the New Kingdom. The connection between flint and the northern sky is first apparent in the Middle Kingdom, though possibly has an earlier precedent. It continues until the Ptolemaic Period.

3 DOES THE CHANGE RELATE TO FLINT DECLINE?

- The second part of the question relates to the relationship, if any between the decline of flint, increase in metal, and flint's ideological use.

While the decline of flint in Egypt has been more rigorously studied in this thesis than elsewhere, many unanswered questions remain. As was known before this study, the Early Dynastic Period was the height of Egyptian lithic manufacture as regards skill and range of tools. A decline can then be seen. However, the significant watersheds in decline appear to be between the Middle and New Kingdom and at the end of the New Kingdom. The end of the New Kingdom is particularly marked by decline (**Chapter 3**).

It is difficult to relate this specifically to changes in the ideology surrounding flint. One can see a particular change in the New Kingdom, though this could be related to the increase in texts and general change in religious thought as discussed by Assmann and others (**2.2.2.7**). Nevertheless, some patterns emerge, as discussed in the answers to the following questions:

3a DO THE METAPHORIC VARIATIONS RELATE TO THE DEGREE TO WHICH FLINT WAS EMBEDDED IN SOCIETY?

While the decline of flint does not simply relate to the degree of ideological use of the material, there does seem some connection between ideology, the decline of flint and increase of metal.

Certainly the commonplaceness of flint does not wholly explain its extent of ideological use or otherwise:

- the Early Dynastic shows a surge in increase of apparent ritual use of flint, yet this cannot coincide with flint becoming more commonplace
- ideological use of flint as shown in text, increases as use in everyday life declines

The first point perhaps needs more explanation. The Early Dynastic incorporates a great surge in skilfully made elaborate items. Yet at this point flint is not more commonplace as a material than before. Instead, the ideological use of the material may be due to the increase in social stratification and growth of the state at this time.

Kingship was associated with prospecting (**5.2.3**). This could explain the concentration of fine flint material in the graves of the elite, the sudden emergence of finely made and apparently ritual flint items at the stage of state formation. State formation could be conceived of as a time when elites would need to demonstrate control and hierarchy. Increased prospecting and mining as well as 'showy' goods may have been part of this. The restriction of certain flint items seems to have continued into later periods in Giza (**map 4**) and Amarna (**5.2.3**), but without the excess of showing wealth and prestige through overly large or showy items. Alternatively one might imagine that after the early Bronze Age, metal may simply have become the material of choice for display (**5.3.1**).

As flint declines the use of specifically flint knives seems to be increasingly stressed in the religious literature, suggesting that it retains, or perhaps increases, its ideological significance. There is, of course, an element here of increased survival of textual information.

There is however, some evidence that the introduction of metal affected the ideological use of flint.

The Early Dynastic to Old Kingdom sees a dramatic fall off in the archaeological evidence for use of flint as a ritual medium (**Chapter 4**). Various reasons could be posited, including the introduction of metal:

- The Early Dynastic is a time of state formation and the extensive use of flint and other materials in this period for ritual display could be a product of elite use. The resultant fall-off could simply be the normalising of elite control.
- Decline of flint in burial could be due to a decline of large elite graves. As is shown in **Chapter 5**, most flint in burials of the Early Dynastic comes from elite burials.
- As is shown in my discussion of physical properties (**Chapter 4**), the luminosity of flint and other materials was a factor of ancient Egyptian cosmology from the Early Dynastic to the Late Period. It is conceivable that with the introduction of metal, so much more shiny than flint, the role of flint in this arena declined. The fact that flint continues to be described in shiny

terms in late texts might be a factor of redundant metaphor or the conservatism of text.

Various factors particularly support the last suggestion.

Prehistorians have long allowed the possibility that copper and bronze were adopted because of their exotic qualities (Renfrew 1986; Bradley 2000, 40). One may further hypothesise that metal was at first used because of its shiny qualities (Keates 2002 suggests this for the Italian Copper Age; Renfrew 1986 suggests that this is a factor in gold's adoption at Varna). Metal, in the form of copper, was not at first physically superior to flint, contra Tillmann (1992, 207) who states that metal was first used in the weapons sector because of its technological efficiency. However, the fact that the first use of metal in Egypt was for jewellery (Scheel 1989, 8) suggests that technological efficiency was not the prime factor. One can imagine, therefore, that it was the shininess of the material which was desirable. Of course, one may also posit other factors, for example the transformative nature of metal production. When flint artefacts are manufactured, the fundamental properties of flint do not change, unlike those of metal ore when made into metal objects. However, the shiny factor is salient in Egyptian text and in relation to other gravegoods.

It would be useful to explore the early metaphors surrounding copper in Egypt in order to understand whether or not flint had assumed a similar role at an earlier date. Aufrère (1991 II, 455–457) considers the metaphors of copper in a general sense. He uses textual evidence, and most of it from a later date, thus work still remains to be done on its early metaphoric use, if such exists.

From the Early Dynastic flint declines in graves but not in settlements (**5.2.4.5**). It seems that the ideological importance of flint for burials had dramatically declined at the end of the Early Dynastic and then continues to decline. This does not go hand-in-hand with the general decline of flint (**5.2.4.5**). As it is during the Old Kingdom that metal use particularly increases, one might hypothesise that metal had taken over the ideological role of flint and further that this related to the quality of luminosity, which was much more a factor of metal than flint.

It is noticeable that in Egypt it is largely with the use of arsenical copper, which appears in the Old Kingdom, that flint appears less frequent in graves (**5.2.4.5**). One might argue that this is because arsenical copper is functionally superior but a functional claim need not negate an ideological one. Additionally, the decline in

physically non-utilitarian flint artefacts seems to largely occur around the 3rd Dynasty; that is, as the widespread use of arsenical copper develops (Ogden 2000, 153).

It may be pertinent at this point to discuss briefly reasons for the decline of flint, though it is not the aim of the thesis. As shown in **Chapter 3** the real change appears to take place at the end of the New Kingdom and beginning of the Third Intermediate Period. This Period coincides with the explosion of international communication between Egypt and neighbouring countries, a situation which Morkot (2008) has stated gave rise to an international arms race. Egypt, as the country less 'progressive' as far as metal was concerned may thus at this point have adopted the materials already used by her neighbours. Iron, which became increasingly common at this period, was arguably the first real rival to flint.

3b) DOES TROPIC USE RELATE TO UTILITARIAN USE (IS THE METAPHORIC USE IN ANYWAY RELATED TO THE UTILITARIAN OR IS IT A SEPARATE CONSTRUCT)?

Physicality of flint does seem to link to its metaphorical constructions, but whether the physicality causes, or is a result of, the salient ideas concerning flint is debatable. The fact that flint, in Egypt, is very similar to the understanding of flint in other cultures (the celestial, storm gods, fire, snakes, etc.) suggests that this is probably a result of the physicality of flint and its working which is largely unchanging across cultures.

3b. IS THERE ANY EVIDENCE OF A MOVE FROM IMPLICIT TO EXPLICIT IDEOLOGY?

The metaphoric themes are largely discussed above. Here I briefly consider metaphors chronologically in terms of implicit and explicit metaphor. As stated in **1.4**, one might expect a general change from implicit to explicit metaphor as flint becomes less commonplace. The actual situation does not appear to be quite so simple.

First I reiterate the archaeological evidence. In the Early Dynastic Period explicit metaphoric use of flint is evidenced by the physicality of the material (oversized, added value, exotic). There is also some evidence from contextual archaeology for the explicit use of flint in ritual to the end of the early Old Kingdom – for example possible use of flint in knapping close to cemeteries; breaking of grave-goods, use of heirlooms; significant numbers of certain flint knives. Flint is then possibly used in explicit rituals from the later Old Kingdom through to the Middle Kingdom, for example in ritual butchery. Later it is occasionally used in execration rites. New Kingdom use of strange shaped nodules at Deir el-Medina (**map 7**) largely evidenced by contextual archaeological information may also be considered explicit.

From the end of the early Old Kingdom however, the evidence is only for the occasional use of flint in occasional rituals.

As for text, from the New Kingdom there is an increase in explicit use of flint in text, though this could be a matter of survival of the text. One might also see a change in the nature of text and flint metaphor from the *Pyramid Texts* onwards. It is only after the New Kingdom that we have actual texts which explicitly state that flint is to be used in particular rituals. In the earlier periods flint is included in narratives but its addition is more casual.

One might argue its significance becomes more apparent for the elite at the same time as an actual decline in its actual utilitarian use takes place. Such an argument however, must remain a hypothesis.

One might expect that if flint was used explicitly in text that it also continued in rituals. It is possible that it did, but that the evidence is not available. There is little New Kingdom and post New Kingdom evidence from archaeology for temple rituals, for example. Rather, most of the ritual contexts for which we have evidence surround the tomb.

Isochrestic style resulting from *habitus*, as was suggested in **Chapter 2, page 52**, may equate at times with implicit metaphor. However, it was also stated that this was not a simple one-to-one relationship. Isochrestic style relating to metaphor may be more likely in domestic contexts, where it is taken for granted (**5.3**). But meaning behind implicit metaphor is much more difficult to deduce. This thesis largely considers explicit metaphor which is more obvious and easier to understand. Much more work needs to be carried out on implicit metaphor, on 'profane' ideology.

7.2 APPROPRIATENESS OF METHODOLOGY

In a traditional study in which an area of ideology is explored through religious text and through temple and tomb archaeological contexts, one might not expect a consideration of whether or not this approach is justified. It has been used for so long in Egyptology that it is considered a matter of 'common sense', and the methodologies are not felt to need justification. However, here methodological approaches are explicitly adopted and are a little more unusual and thus their suitability must be briefly considered.

USING TEXT AND ARCHAEOLOGY

Using text and archaeology together is a problem but also a virtue because:

- They provide different types of information
- Each is more available in different times and circumstances

For Egypt, archaeological evidence is particularly important in the earlier periods, simply because text is not available. However, this does not mean that archaeology is also not of value for later periods where it may provide information on the non-elite and on the everyday. It appears that text can be very precise in its meaning, differentiating the connections between flint and specific gods for example. However text by no-means gives the complete picture, so much so that at first glance, text is sometimes at odds with what is apparent from archaeology. For example, flint knives seem more apparent in text in the later periods than the earlier periods while archaeologically speaking the occurrence of flint knives decreases, especially after the Early New Kingdom. Additionally, text does not explain many of the features apparent from a physical examination of flint artefacts, nor indeed the archaeologically contextual information. The approach of using both archaeology and text clearly covers more areas than one and gives a much more holistic, accurate picture.

In using text in particular, there is the problem of translation (**2.3.2.3**). Here there are two problems, the first that we may never fully understand the nuances of an ancient terminology. The second is that western terms such as ‘flint’ do not neatly fit ancient categorization. For ancient Egypt it seems likely that the term *ds* only loosely conforms to what we mean by ‘flint’. This loose correlation makes it particularly difficult to justify exploration of any one material or object type through a study of text alone and makes the consideration of archaeological evidence all the more valuable. One might also add that the loose Egyptian categorization negates the use of a tight definition of flint in this thesis.

USING METAPHOR THEORY

As stated in **Chapter 2**, metaphor theory has been variously construed and thus its application here may not be in line with how other scholars would have applied it. Nevertheless, it has proved of value showing the metaphoric use of flint in both text and archaeology and suggests that metaphor may be a valuable way of looking at Egyptian and other artefacts.

An exploration of the possibilities of applying metaphor in relation to archaeological artefacts, other than Egyptian lithics, is a potentially fruitful line of enquiry. One might argue, however, that it is particularly useful for historical societies where we also have the addition of text to allow 'contextual density' and for Egypt, of course, determinatives in the scripts allow us to understand something of ancient ideas of categorization (**2.2.2.8**). At the same time, metaphor could be used to discover the ideology surrounding artefacts and materials, an underexplored area of Egyptology (**1.1**). In understanding other materials and artefacts, we may be better able to separate those metaphors that surround flint from those that surround the knife, or, perhaps, to show the degree to which they are interrelated. Because previous studies on the religious significance of flint dealt largely with the word *ds*, and because this word can mean flint or knife, it is possible that the flint material was sometimes confused with the flint knife in those studies. By looking at metaphors surrounding archaeological artefacts, as well as textual evidence we may be able better to distinguish the form from the material.

There are of course problems in using metaphor theory in this thesis. Metaphors of text and objects work in a different way. One might question if it is appropriate to use them together. However, there are sufficient similarities to justify this. Additionally, both are produced by largely the same societies and the way metaphors work is formed in the mind whether they be textual or object metaphors. Metaphor theory in other disciplines is interested in causative factors. In using metaphor theory for the past however, there are problems. The earliest attestation of a feature cannot be assumed to be its point of origin.

Finally, one might say that use of metaphor theory in this sense is a use of the obvious, since Egyptologists use metaphor to explain religion all the time. However, most usage of this kind is unsystematic and makes many unargued assumptions; in this thesis, by contrast, I make my methodology explicit.

MEASURING DECLINE OF FLINT

My attempts to measure flint decline largely supported what was already thought to be the case. However, it also showed that the decline was not steady, nor directly and simply associated with metal increase.

The area which might be most criticised is that of the metrical analysis which on the face of it did little more than confirm the initial observations achieved through familiarity with the material. Furthermore, each of the individual metrical measures only showed small changes, and some none. These areas are discussed in more detail in **Chapter 3;** here I show that for the following reasons the methodology itself is valuable:

a. Metrical analysis helps negate the charge of seeing imagined patterns which conform to expectations
b. The cumulative results of the metric analysis shows that there was a real change in flint use in Dynastic Egypt
c. The metrical analysis attempts to critically draw together methodologies for measuring flint decline
d. The section on skill condenses the core methodology behind several other areas of research into flint variability
e. The section exploring skill is unusual in studying skill through archaeological data and could be used for other lithic populations
f. Measuring decline partly through construction of a typology has the unintended result of bringing to light hitherto unrecognised types and contexts

a. Metrical analysis helps negate the charge of seeing imagined patterns which conform to expectations. The metrical analysis was only part of the methodology for measuring decline, the other relying on the researcher's familiarity with the data. Nevertheless the metrical analysis was a major part of the methodology, and, one might argue its usefulness was negated by non-metrical analysis. However, without metrical measurements the thesis could have been rightly criticised for uncritically assuming patterns of decline, of allowing the researcher's expectations to influence results (observer bias).

b. The cumulative results of the metric analysis shows that there was a real change in flint use in Dynastic Egypt. While each area of analyses (e.g. the change in thickness of blade, the counts of mistakes) showed only small changes, none contradicted the overall pattern and cumulatively are significant.

c. The metrical analysis attempts to critically draw together methodologies for measuring flint decline, which as far as I am aware has not been done to such an extent before. Rosen (1997) is one of the more recent and looks at quantitative decline in artefacts together with typological restrictions. Earlier scholars have looked at individual aspects of skill (though have not usually identified them as skill per se) as measures of flint decline (e.g. Healy 1981; Ford et al. 1984; Runnels 1985). Finally, there have been good attempts to look at skill as a measure of specialisation, apprenticeships, etc. (e.g. Pigeot 1990). These, and others, are discussed in more detail in **Chapter 3**. This thesis brings together all these aspects, quantative decline, typological decline and importantly explicitly integrates archaeological measures of skill into the equation, starting with a discussion of how we may define skill and how it may relate to flint decline.

d. The section on skill condenses the core methodology behind several other areas of research concerning flint variability. While others have considered mistakes, numbers of bifaces, etc. the fact that all these areas show skill is rarely explicit.

e. Furthermore, the section exploring skill in particular, is unusual in studying skill through archaeological data and could be used for other lithic populations. The section relating to measurement of skill could be said to be novel in that skill is, with some exceptions, usually measured using anthropological means (**page 85**). One could say that in searching for archaeological markers of skill I have employed traditional middle-range theory in an underexplored area. There have been exceptions, such as the work of French lithicists in considering measures of skill in looking at apprenticeship, and the work by Marcia-Anne Dobres (2000) in considering skill in relation to cultural groups such as age and sex. This thesis includes their work, and others, in a discussion of flint decline.

f. Measuring decline partly through construction of a typology has the unintended result of bringing to light hitherto unrecognised types and contexts, which can be used to open up and develop new avenues of research. For example: ‘razor’ blades have not previously been seen as knapped near tombs; burnishers had hitherto not been mentioned in literature; ‘snubbing’ or bevelling of knives was shown to be due to handedness rather than separate types. These are unintended ‘spin-offs’, but valuable in their own right. For example, the exploration of handedness in ancient lithics can be used to explore whether or not cultural norms of a preference for right-handedness extends to everyday lived experience such as manufacture of stone knives. It appears that it does not (**Appendix I, pages 429-430**). Further exploration of two

dimensional representation, not discussed in this thesis but briefly explored by the author, reveals that while the deceased and deities may be shown as right or left handed, butchers are invariably shown as right handed in carrying knives. It would be interesting to further explore why this may be the case.

Of course, since the core purpose of this thesis was to study the ideology of flint, rather than to measure its decline, attempts in the latter area must remain brief and thus only a first and tentative step toward a better understanding of this area.

7.3 FUTURE RESEARCH

The thesis has thus increased the data for ideological aspects of flint in both textual and archaeological sources and for the decline of flint I put forward new ideas on the metaphoric links of flint with suggestions as to how these may operate within a decline of flint in utilitarian fields. However, there is still much which is speculation, and a need to examine the topic further. In particular:

1. The thesis has shown that a proper understanding of ideology depends upon a holistic approach including text, archaeology and iconography within a wider background of understanding ancient Egyptian society. It is this more holistic approach which needs to be expanded.

2. The ideology of flint on traditionally 'profane' sites such as settlements is hampered at present by lack of detail in excavation reports. This would potentially give more detail on implicit metaphor.

3. There is a need for broader studies of areas where flint appears significant: e.g. the breaking of funerary items in early Dynastic Egypt. This has been done to some extent for text but a more in-depth study is needed for archaeology. Potentially profitable areas of study include the relationship of gender to the working and use of flint and the use of flint on settlement sites.

4. There is a confusion of form with material in the Egyptian texts. We often do not know if *ds* meant a flint or metal knife, and if the knife form or flint material is significant. A comparison of flint with other materials notably metals might help here. A study, for example, on the religious significance of the metal knife would be useful (For a brief discussion of this in relation to archaeology see **4.3.10**)

5. It might be argued that flint also bears something in common with other stones. For example, semi-precious stones are known to be creational. Perhaps more work needs to be done on more humble stones such as sandstone to know whether all stone was creational. For work on other stone relating to longevity see **4.2.4**.

6. Recognition of patterns within my small database of textual and archaeological information, spread over a long period of time, could be questioned. While care has been taken to use only robust patterns, and where possible to search for substantiation in the ideology of ancient Egypt – to see if the metaphor fits with what is already known – there is still the need for more data. This is unlikely to come from text, which already has been extensively studied. It could come from archaeology.

7. The decline of flint is very difficult to measure. There is a need for a study of data from recent excavations, a study which includes not only 'tools' but also debitage.

7.4 Conclusions

The intertwining three areas of the physicality of the object, its context and textual information show that the meaning of artefacts does not lie in any one of these areas alone. The meaning surrounding artefacts lies in the connections between artefacts, human culture and environment. Metaphors are not static but both a social process and an outcome. They are themselves formed from connections but in turn they shape other connections.

This preliminary study has thrown up a number of ideas which would benefit from further study. Particularly important is the need to have more archaeologically contextualised data on flint on both settlements and funeral sites. Additionally a comparison of the religious significance of other materials, particularly metals would be useful to understand if flint is unique or very similar to other materials. There remains much potential in the study of the ideology of Dynastic flint.

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The Ideological Significance of Flint in Dynastic Egypt

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APPENDIX 1

TYPOLOGY AND BACKGROUND INFORMATION

This Appendix is both a typology and background notes. In this thesis, the typology is a tool to investigate the nature of flint decline (Chapter 3), as well as explore ideology which might obviously be related to function or manufacturing technique. It is thus not simply a description of form of the item but also incorporates, and where known, function and manufacturing technique. I attempt to take note of ancient Egyptian groupings of form, function and manufacture, where known.

As there is little published on Egyptian Dynastic lithics, it was felt that the reader might also require background information which might not be strictly related to a typology. At times this is also necessary to make sense of the main thesis. For example, contextual information was particularly required for **Chapter 5**. The Appendix is thus an expanded typology. This Appendix should be consulted in conjunction with the plates.

No extensive typologies for Dynastic Egyptian flint in general exist, though limited ones have been constructed, either to suit individual site analysis, or for particular categories such as scrapers (Hikade 2004), or arrowheads (Hikade 2001). This typology is constructed from collections of material in British museums and published examples. It is by no means definitive and must be regarded as provisional. However, although not exhaustive, it clearly illustrates that a number of tool categories had not previously been recognized.

Ideally it would have been desirable to discuss all the tools by function as tool ideology is frequently related to tool function. Egyptian texts, for example, show that knives are divine weapons, whether of flint or metal. Thus, their function, in this case, transcends method of manufacture and to some extent form[1]. Unfortunately however, the function of several types is not obvious and a number may be multipurpose.
I have tried, where possible, to avoid imposing my own categorization inappropriately upon the past. So, for example, bifacial arrowheads are here subsumed under arrowheads rather than bifacial tools because we do not have the evidence that the Egyptians would recognise the category of bifacial tools. Certain items such as knives and arrows have an iconographic status and are used as determinatives in ancient

[1] This is not to say that at other times material is the most important factor.

Egyptian language. Determinatives may be used to help understand Egyptian categorization.

A second major problem with this typology is that I have taken unretouched blades and flakes with a high percentage of cortex, and often irregular shape to be waste. However, it is possible that these are *ad hoc* tools associated with Bronze Age lithic working (**Chapter 3**). A number of these are found at New Kingdom Amarna (**maps 3 and 5**; Ashmolean 1893 1-41 931 and 1893 1-41 932) perhaps used for butchery (Graves-Brown 2009). Other problems of typology construction are discussed in **Chapter 3**.

In order to reduce confusion I have used standard terminology where possible and have given commonly used alternatives.

The typology is constructed from published excavated material but also from material held in British museums, much of which was not published. Problems concerning both sets of data are outlined in **Chapter 3**. The unpublished material utilized is largely only material from securely dated and provenanced contexts. However, occasionally material was included where it was felt that it was reasonably securely dated and from reasonably secure contexts and additionally where it contributed to the technological understanding of the artefacts. Any doubts over dating are discussed in this typology.

1. Sources of raw material

Most chipped stone industries in Dynastic Egypt utilised flint. Rock crystal was employed to some extent in the Early Dynastic Period, obsidian was occasionally utilised, and chalcedony, glass etc. knapped in lapidary work.

Little work has been undertaken regarding specific sourcing of flint for Egypt with James Harrell being one of the few modern workers to examine areas of flint mining (pers. comm.). Thus, what we know of sources is extremely limited.

In Egypt flint derives mainly from Eocene and sometimes from Cretaceous limestones and is largely ubiquitous over much of northern Egypt. Until recently the most southerly source was thought to be West Theban Eocene flint (Tillmann 1999, 262). However, more recently a source has been found at Hierakonpolis (**maps 2, 6 and 8**; Friedman and Youngblood 1999).

There are two types of source, mined and surface deposits. Flint cobbles are particularly abundant as surface deposits along the terraces adjacent to the Nile. Sometimes the quality of such flint may be as good as that of the mined flint (Rizkana

and Seeher 1988, 15), though usually the mined flint is better. Additionally, the small size of the surface cobbles means they are only suitable for artefacts up to 7cm long and nodular or tabular mined flint is required for larger pieces.

Flint from Egyptian sources, particularly those which are mined, has a fine homogenous structure and flakes well (Holmes 1989 II, 459). Flaked pieces exhibit a slightly glossy surface and colours are variable but mainly light to mid greys and light to mid browns. Darker flints also occur in smaller quantities. Colours do sometimes equate to origins, though similar colours can also be found in different sources. Patination of flaked Dynastic pieces is rare.

It would seem that on individual sites, different sources were preferred for different tools. For example, Holmes (1992) showed that in the Predynastic–Early Dynastic site of Hierakonpolis, bifacial tools were mainly manufactured from fine grained flint (particularly cream and translucent flint), and coarse grey flint was particularly preferred for micro-drills. At Old Kingdom Elephantine (**map 8**), local flint was preferred for heavy tools such as borers, scrapers, axes and chopping tools (Hikade 2005–2007, 8) while 'razor' blades were made from imported flint. Schmidt (1989a, 82) reported that at Tell el-Iswid, a Predynastic–Early Dynastic site, glassy caramel coloured nodules were largely used for large flakes. Blades were made from opaque honey-brown to wine-red red flint without cortex.

Mined flint

Mined flint has superior knapping qualities to that found on the surface. Flint is known to have been mined in Egypt since the Palaeolithic (Vermeerch *et al*. 1984a, 1984b, 1989; Bednarik 1990), though many mines are difficult to date. There appears some suggestion in Egyptian texts that minerals were largely mined in the Eastern Desert (Aufrére 2001), though this could be ideological rather than real (**Chapter 4**). Known mines are shown on **maps 1 and 2**. Most mined sources of flint seem to be in or near cliffs and hills.

An Early Dynastic tabular and nodular flint quarry is known from Gebel Safr, Wadi Abu Had (**map 1**) in the Eastern Desert (Bomann 1995, 15-17). Bowmann describes flint outcrops of nodular or tabular blocks on top of a limestone ridge which were situated near naturally flat 'platforms' where knapping could take place. There were also south facing gravel screes and outwash terraces which contained flint. Baumgartel (1960, 24) cites a tabular flint mine on the Sinai Peninsula near Wadi Maghara discovered by Seton Karr. Old–Middle Kingdom flint mines are known from

Gebel el-Sheik (**maps 1 and 5**; Forbes 1900; Weisgerber 1982, 1987 with further references) and Wadi Sojoor, el-Tod (**map 1**) on the Eastern bank of the Nile near Armant (**map 6**; Fuchs *et al.* 1998, 34). Wadi el-Sheik also seems to have been exploited in the Middle and New Kingdoms (Tillmann 1999, 262) for tabular flint. A quarry north-west of Cairo in Abu Roash (**maps 1 and 4**), seems to have supplied flint to the Delta from the late Predynastic period (Tillmann 1999, 264). Flint also occurs in a nodular form above Qasr el-Sagh (**maps 1, 4 and 5**; Cagle 1994–2006). More recently James Harrell has discovered a New Kingdom (probably Ramesside) mine and fortified site at Wadi Umm Nikhaybar in Wadi Araba (pers. comm.) another at Hierakonpolis and one at Ain Barda are listed on his web site (Harrell 2010). This site appears to have produced blades. The Hierakonpolis mine is also discussed elsewhere (Friedman and Youngblood 1999). It is likely that many other desert mines remain undiscovered.

In most reports only the grid references of the sites are given with very little description of mines. Seton-Karr (1898) describes the Wadi el-Sheik mines as being situated along the ledges on cliff faces or on level ground. 'These latter resemble the ruins of cities with walls and towers, overthrown by an earthquake, a present a fearfully desolate appearance.' Later descriptions suggest open-air quarries situated on plateaux (Weisgerber 1987). Other mines described by Seton-Karr had shafts of around 2 meters in diameter, now filled with sand. Baumgartel (1960) describes the pits as having an outer layer of chalk. The mining area covers several square kilometres.

The Hierakonpolis mine (Friedman and Youngblood 1999) is described as being on a slope of a ridge of Wadi Khamsini (**fig. 1**) with flint derived from deposits of fossilised corals. Ceramics attested to the date of the mine.

Local surface flint

Fist-sized nodules of flint occur almost ubiquitously in Egypt and tend to be used locally for tools requiring low manufacturing skill levels. Some of this material is found as river pebbles along terraces adjacent to the Nile Valley (Rizkana and Seeher 1988, 14). In Egypt, flint is naturally found in the desert, particularly in wadis where it was not only mined but picked up from the surface. There is some evidence that flint may have been collected by craftsmen, other than those specializing only in flint. The arrow-maker in the *Satire of the Trades* goes out into the desert (Seibert 1967, 168; Helk 1970, 90), presumably to find flint to make arrows.

Flint as a by-product of tomb building

Flint is found as a by-product of rock-cut tomb building, as has been especially noted in New Kingdom Thebes (**map 7**; Seton-Karr 1905; Mackay 1921; Miller 1987, 206; see also **Vol. 1, 181-182**). The area of Thebes west is a hilly or mountainous area interdispersed with wadis with the tombs set into the hills, or mountains along the wadis.

Tabular flint

Rizkana and Seeher (1985, 238) point out that many so called 'tabular scrapers' from Maadi (**map 4**), show a distinctly curved surface suggesting that they were detached from huge boulders rather than tabular flint. They therefore prefer the term 'tabular-like' scrapers. Rizkana and Seeher (1985, 238) suggested that the tabular scrapers in Egypt may be imports from the East. Hikade (2004, 61) appears to concur, at least with reference 'tabular' and 'fan-shaped scrapers'.

However, true tabular flint is used in Egypt, particularly for knives. I have examined artefacts in British museums with two or more flat opposing cortical surfaces, for example a knife fragment from 3rd Dynasty Koptos (**map 6**; Liverpool 56.20.110) and two knives from Early Dynastic Abydos (**map 4**; M5386a and b, **plate 33**. Their illustrations show cortex on dorsal and ventral sides. It is also clear that flint tools from Amarna (**maps 3 and 5**) were made on tabular flint (Graves-Brown 2009). Additionally, lithics experts working on other sites have identified 'tabular flint' (e.g. Midant-Reynes 1998; Conard 2000, 25; Kobbuseiwicz, 2003, 13).

Tabular scrapers and knives occur in the Nile Delta Predynastic period (Rizkana and Seeher 1985; 1988, 15–16, 29–31). The oversize, roughly shaped cortical Predynastic/Early Dynastic flint knives from Hierakonpolis (**maps 2, 6 and 8**; Quibell 1900, 6, pl. 3; Adams 1995), now in the Ashmolean museum, also appear to have been made from tabular flint. Tabular flint is commonly used in the Old Kingdom for tools in the Dakhla Oasis at ʿAyn-Asīl (**map 3**; Midant-Reynes 1998) and ʿAyn el-Gazzareen (**map 3**, Kobbuseiwicz 2003, 13). At, ʿAyn-Asīl it continues into the First Intermediate Period. It is also used at the Old Kingdom sites of Giza (**map 4**; Conard 2007, 25, 27–28) and Abusir (**map 4**; Svoboda 2006, 502). Additionally, Berman *et al*. (1999, 183) describes a 13th Dynasty axehead from Harageh (**map 4**), Middle Egypt made from tabular flint.

Tabular flint occurs in Egypt itself. Long thin slabs of the material can be seen in the walls of the rock cut tombs at Thebes (**map 7**). According to Miller (1987a, 206) 'large flat nodules are found in dry valley beds of former western tributaries of the Nile, and these provided a very high quality of knapping flint without frost fractures.' As stated above, an Early Dynastic tabular flint mine is also known at Wadi Abu Had in the Eastern Desert. Tabular flint also occurs in the Upper Eocene, Lower Oligocene beds which outcrop at Qasr el-Sagh in the Fayum (**maps 1, 3, 4 and 5**; Beadnell 1905; Caton-Thompson 1926; Caton-Thompson and Gardner 1934; Wendorf *et al.* 1976).

Rock crystal

Some rock crystal may have come from river gravels (Rizkana and Seeher 1985, 238), though other material could have been imported from Nubia (Zibelius-Chen 1988, 83). It is possible that rock crystal is included in the lists of tribute from Nubia mentioned in P. Koller 4, 2 (Zibelius-Chen 1988, 44), though this depends on *ỉrḳbs* being identified as rock crystal.

2. Workshops

Very few workshops for flint are known, though it seems likely that they would be associated with royal centres (Hikade 2004, 58). Additionally, there is some evidence that flint manufacturing was associated with graves, perhaps as flint is a by-product of tomb digging (**Vol. 1, 181-182**).

For the late Predynastic–Early Dynastic a workshop seems to have been associated with the Hierakonpolis (**maps 2, 6 and 8**; **fig. 2**) temple area (Holmes 1992). An Early Dynastic workshop seems to have been associated with the cemetery at Helwan (**map 4**; Hikade 2005b). At Early Dynastic Meidum (**maps 3 and 4**) blades from mastabas could be refitted (Petrie 1892, 18, 34–35, pl. 29 nos. 20–21) suggesting a nearby workshop. From much later New Kingdom Amarna (**maps 3 and 5**), sickle blades abound on the palace waste heaps suggesting that they were made here (Spurrell 1894, 37). James Harrell's work at Wadi Umm Nikhaybar (James Harrell pers. comm.) has shown that as late as the Ramesside Period the Egyptians appear to have engaged in mass production of regular blades. Ramesside Qantir (**maps 3 and 4**) not only had concentrations of flint but also numbers of arrowheads all weighing exactly 1.5g (Herold 1998, 136–137).

This seems to have been a workshop for arrowhead manufacture.

3. Cores

Plate 1.

Cores are an anomalous group within a discussion of tool typology, since they are often classified with debris (e.g. Inizan *et al.* 1999, 59). However, they are included in this typology because they were present in the museological collections studied, albeit in small numbers, and because they provide important technological information.

Cores are blocks from which flakes or blades have been removed, thus have both striking platforms and multiple removals (Rosen 1997, 31). They differ from core tools (**Appendix 1, 4**) in not appearing to have been used as tools within their own right. Instead, cores are primarily sources of raw materials (Andrefsky 1998, 137). Andrefsky (1998, 137) categorizes cores into unidirectional and multidirectional (in which he includes radial and bipolar types), and one may also add bidirectional cores.

A study of site excavation reports from Egypt shows that generally few cores are found on flint use-sites (Schmidt 1985, 282; Tillmann 1992, 151). This was confirmed by my recent study of flint from recent excavations at Amarna (**maps 3 and 5**; Graves-Brown 2009). The separation of places where cores are roughed out and places where cores are worked to produce tools appears in other cultures (for example, Torrence 1986; Pecora 2001) In Egypt cores probably largely occur either near quarry sites, or specialised manufacturing areas, of which few Egyptian Dynastic examples are known.

There are very few cores in British museums and those identified seemed to have been used to manufacture flakes or small blades. However, a number of core refits were also found dating to the Early Dynastic and Old Kingdom which give an insight into the technology of the manufacture of broad blades. These refits are discussed under the section on broad blades.

Evidence for flake cores and blade cores is here divided and each described chronologically.

3.1 Flake cores

Conard (2000, 27–28) notes a number of flake core types at Old Kingdom Giza (**map 4**), all from desert, that is, surface flint (tabular flint was also used at this site). His types may be summarized as follows:

- Unifacial cobble cores with a mainly cortical surface. This type, and the bifacial cobble cores, could be classed as choppers but since there are few traces of wear it appears that they were cores used to produce small flakes

- Bifacial cobble cores again with most of the surface cortical. Here cores are chipped on two sides. Unmodified flakes were found near these cores.
- Uni-platform cores. This form differs from those above in that flakes are removed from an interior striking platform rather than a cortical or near cortical surface.
- Bi-platform flake cores with two clear striking platforms.
- Centripetal cores of which only one was found.
- Polyhedral cores in which flakes are moved from various directions with no well developed platforms.
- Waste cores. Very small exhausted cores

There were no blade cores reported by Conard despite the presence of blades. It must be presumed that the blades were produced off site, presumably by specialists.

Tortoise cores, so called because their shape resembles that of the tortoise shell, are usually associated with the Levalloise technology famously described by Bordes (1961). Although usually associated with the Middle Palaeolithic, they are also found in Egypt in the Middle Kingdom. The technique is not a chronological marker (Inizan *et al.* 1999, 63) The reduction sequence employed for this type, debate upon definition and further references appear in various publication including: Boëda (1994); Andrefsky (1998, 139–147); Inizan *et al*. (1999, 62–68). Van Peer (1992) has written on the Egyptian Palaeolithic material.

Tortoise cores were found at Lahun (**maps 4 and 5**) dated to the 12th Dynasty (Ashmolean 1921.1394.1–3; M6684A, C, **plate 1.2**; Petrie *et al*. 1923, 21, pl. 39 nos. 102–105). Such cores appear to have been made from fist-sized nodules which could have been locally found on the surface. A similar Middle Kingdom core was found at Tell el Yahudiya (Ashmolean 1888.267/8; **plate 1.1**).

Five flake cores were also found in the Workmen's Village at Amarna (**maps 3 and 5**; Miller 1987b, 147). Patina on some shows that flint may have been flaked at an earlier period. The variety in type suggested to Miller the work of 'competent but unspecialized knappers'.

3.2 Blade Cores

At Wadi el-Sheik mine (**maps 1 and 5**), Pawlik (2005, 207, fig.31) observed a number of blade cores, which he called the 'donkey hoof' type. The illustration is not clear but suggests semi-conical cores of 10–15cm long which Pawlik states are far from exhausted. The dating of the cores is not given though the mine was in use from the

Middle to New Kingdoms. It is known that this site was also exploited in the Predynastic Period (Rizkana and Seeher 1988, 15).

Pawlik (2005, 196–197) uncovered 26 blade cores at Old Kingdom el-Ahmar (**maps 2, 6 and 8**). All had one striking platform and one convex reduction face and were oval to elongated in top view. Dorsal reduction to prepare platform edges was apparent.

A single platform core was found at Early Dynastic Helwan (**map 4**; Hikade 2005b. pl. 34.1; **plate 2.1**).

A pyramidal blade core measuring 42x43.3x16.2mm was found at Abydos (**map 4**) from the Early Dynastic tomb of king Den (PR 1901.40.70.1). Another was found from New Kingdom Amarna (**maps 3 and 5**; Ashmolean 1893 1–41 933). Its small size (20x35.9mm) means it can only have produced short blades. Cortex suggested it had been made from a fist-sized nodule. The top section had been cut off perhaps as an attempted rejuvenation strategy (though there is no evidence for continued use of the core following this action).

A blade core from Middle Kingdom Harageh (**map 4**; Petrie Museum UC6457vi) takes the form of a 'tablet' of material from which blades had been taken off in a row, rather like a deck of cards. The small size of this piece (36.8x26.5x8.9mm) suggested short blades, though the distal end had been broken off.

Cores have also been found in the Valley of the Kings dating to the New Kingdom. As stated above, it is believed that flint was taken from the Valley of the Kings as a by-product of tomb excavating, thus this area could be regarded as a quarry site. Miller (1987a, 206) wrote 'It was still possible in 1979 to observe on top of tomb shafts in the Valley of the Kings concentrations of blade cores, together with long cortical flakes struck in order to remove the outer surface of the nodules, as well as crested flakes and plunging flakes shooting over the base of the core.' Unfortunately it is difficult to identify the nature of cores and blades from Miller's illustration.

3.3 Core trimming elements

Some typologies include flint pieces such as overshot blades, within the definition 'core trimming elements' (e.g. Rosen 1997, 31; Goring-Morris 1987, 49). Here however, I only include trimming elements such as core tablets, crested blades, i.e. those elements used in core preparation.

3.3.1 Core tablets

These are sometimes called core rejuvenation flakes or platform rejuvenation flakes (Crabtree 1982, 50; Payne 1983, 670–671).

These carry truncated blade scars from previous working of the core and are usually intended to improve the striking platform or the angle between the striking platform and dorsal face of the core (Odell 2004, 121). Removals around all or part of 'tablet' leads to them being mistaken for scrapers, but the removals are abrupt and precede removal of the piece from the main core.

I have found only one example of a core-tablet in the collections from British museums, a Middle Kingdom example from Beni Hasan (**map 5**; Ashmolean E2283).

3.3.2 Crested blades

These are sometimes called Primary Ridge Blade or lame à crête.

A straight ridge is necessary to remove the first blade from the core. The first blade struck from a prepared core in blade manufacture is the true crested blade. Shaping is achieved by bifacial removals which form a crest or ridge used to guide the removal of the first blade. Such a blade has a triangular cross-section. Further removals may show only part of the crest. Crested blades are discussed in Payne (1983, 669–670) and illustrated in Inizan *et al.* (1999, fig. 64). Although usually associated with the blade industry, crests can also be used to simply shape the core without the intention of producing a blade.

As blades seem to have been salient in Dynastic Egyptian flint industries, one would expect a high number of crested blades. That does not seem to have been the case. One of the few from British museums is BM EA67613 from Lahun (**maps 4 and 5**). Perhaps they were not recorded or collected by excavators, or perhaps manufacture sites are largely unknown.

4. Core Tools

Plates 1-2.

These tools are sometimes called cobble choppers or chopping tools. As the name 'chopper' might suggest, these tools are generally assumed to have been used for rough and heavy duty chopping.

Core tools are manufactured by breaking open a pebble by flaking angle edges or by splitting the pebble. Flakes are then removed either bifacially or unifacially. It

can be difficult, or indeed impossible, to differentiate between partially reduced choppers and early stages of core reduction (see section on cores) unless there are traces of wear on the chopping end.

Because of the crude appearance of such tools and their traditional link with the Palaeolithic, pebbles adapted as chopping tools are often considered early, that is, prehistoric, in date. However, a number have been found from sites in Dynastic Egypt.

'Pebble hand-picks' measuring 3 to 4 inches long have been found in the desert Fayum in numbers at Qasr el-Sagh (**maps 1, 3, 4 and 5**; Caton-Thompson and Gardner 1934, 129, pl. 67). While these are often considered Palaeolithic, Caton-Thompson suggested an Old Kingdom date (Caton-Thompson and Gardner 1934, 129 footnote 3). However, it now appears that this site may date to the Middle Kingdom (Ginter *et al.* 1980). Caton-Thompson also found a great number at the Umm-el-Sawan quarries together with Old Kingdom pottery. 3rd Dynasty chopping tools are known from Elephantine (**map 8**; Hikade 2002) and 5th – 6th Dynasty examples were reported from Abusir (**map 4**; Vachala and Svoboda 1989, 178, fig. 4; Svoboda 1993).

Many examples were also found at Middle Kingdom Lahun (**maps 4 and 5**; Petrie *et al*. 1923, 21, pl. 39; **plate 1.2**) and Tell el-Yahudiya (e.g. Ashmolean 1888.267/8; **plate 1.1**).

The latest known date for these tools, for which I am aware, is the New Kingdom. A number of chopping tools made from crudely shaped pebbles were found at the New Kingdom site of Qantir/Piramess (**maps 3 and 4**; Tillmann 1986, 153; Tillmann 1992, 72–77, pls. 8–12; **plate 2.2**). Tillmann (1992, 74–75, fig. 50–54) sees the Qantir types as representing two different size groups. One group measures between 35 and 60mm long and 30–50mm wide and the other 60–90mm long and 50–60mm wide.

5. Burnishers

Plate 3.

Petrie called these 'polishers' and the Petrie Museum catalogue describes them as 'burnishers'.

These elongated teardrop shaped objects measure between 3 and 5cm long. They are highly polished, and elliptical in cross-section. Although largely undated, UC145 found at Amarna (**maps 3 and 5)**, probably dates to the 18th Dynasty or the Roman Period (Roman Period material is well known at Amarna, see Kemp 1993) and the two examples from the Bucheum are probably 30th Dynasty (Mond and Myers

1914, 124). Thus on balance it seems these items are late Period to Graeco-Roman. A very similar object (UC15277) is described by the Petrie Museum online catalogue (accessed 2006) as a 'chalcedony (?) polisher for papyri' (geologically, chalcedony is simply attractive flint).

I have only found examples of this type in the Petrie Museum (UC145; UC15277; UC59582; UC59581) and one in the Fitzwilliam (Fitzwilliam E.355-1954[2]), though it is possible that given their attractive appearance they are also present in other museums though not recognized as flint. It is also possible that such items were made in material other than flint, though I have not seen any.

Caton-Thompson (1934, 126) mentions 'the little polished flint rods of unknown use in the St Germain Museum, found by de Morgan in the Abydos Royal Tombs….' It is possible, though by no means certain, that these are 'burnishers'.

Petrie (1920, 42, 44, pl. 9.42, pl. 9.44; 1927, 64, pl. 56 no 35) believed such items, which he described as 'polishers', to be scribal artefacts for use on papyrus though he did not specify how such an item would be used. Presumably, given the name 'polisher', Petrie believed they were used for smoothing papyrus. According to Pliny, 'rough spots [of papyrus] are rubbed smooth with ivory or shell' which makes the surface shiny and less absorbent (Leach and Tait 2000, 237). While Leach and Tait state that experiments have shown no advantage in burnishing, they also state that the inside of a funerary papyrus roll is often smoother than the outside suggesting that burnishing did take place.

There are problems in assuming that our teardrop flints were used for burnishing papyrus. Firstly, a larger smooth pebble would be better suited to the purpose. Secondly, it is difficult to see why a papyrus burnisher would need to be teardrop shaped. Finally, more probable examples of burnishers found in scribal kits are not of this material, not as small, not teardrop shaped and appear more suited to purpose due to their larger 'smoothing' area. For example, a stone pestle shaped object described as a 'papyrus burnisher' in Lacovara *et al.* (2001, 82–83) measuring1.8 x 5 x 6.1cm fits in the palm of the hand. Another wooden 'burnisher' of the late Second Intermediate Period or early New Kingdom was found with scribal tools (Parkinson and Quirke 1995 fig.19, 34–35). An ivory burnisher found in the tomb of Tutankhamun (Edwards, 1976. pl. 20, 144–145 cat no.34) would have been too flimsy to actually use (Parkinson and Quirke 1995, 33) but its shape is very different from the flint items. An elliptical stone measuring 3.8 x 8.9 cm, in the Museum of Fine Arts

[2] Unfortunately I have been unable to examine this particular item.

Boston (Boston MFA 72.789, Eggebrecht *et al*. 1987, 130 no.37) has also been interpreted as a burnisher. A wooden burnisher with handle is also known (Hayes 1953, 292, fig. 193). Hayes states that the Metropolitan Museum of Fine Art possesses four fragmentary burnishers from Twelfth Dynasty tombs at Lisht (**maps 4 and 5**) and a complete example, probably of the same date, from Thebes (**map 7**; Hayes 1953, 294).

The teardrop pieces look remarkably similar to modern tools used for burnishing gold leaf e.g. http://www.blotspens.co.uk/acatalog/Burnishers.html. It is thus tempting to suggest that this was their purpose. Thompson (1962, 67) discusses techniques of modern gilding and states most modern burnishers are made of agate or flint. Agate is geologically similar to flint, being a micro-crystalline quartz and can be highly polished so as to prevent scratching gold leaf (pers.comm. Peter Miller, Society of Gilders 20.7.05). The following site describes why the tool may be teardrop shaped for modern gilders: http://www.ganoksin.com/orchid/archive/200011/msg00143.htm

Gold leaf is known from earliest times in Egypt, so such a use is possible. Scheel (1989, 38) suggests that agate was used for polishing various metals in ancient Egypt and further states that it is still used by goldsmiths in Egypt today. Aufrère (1991 II, 377) also states the Egyptians used agate to polish gold. His reference is 'Vercoutter Mirgissa III p 160'. However, Vercoutter (1976, 160) only supposes the existence of burnishers from the existence of burnished gold. No burnishers are actually illustrated, cited or their appearance surmised upon.

Hayes (1959, 409) states that two pointed quartzite burnishers of the type used by metalworkers were found at Lisht (**maps 4 and 5**) with Twentieth Dynasty material. Nearby was found a section of hollow reed packed with small fragments of gold foil and plugged with a wad of linen. This has been identified as part of a goldsmith's supply of scrap metal. However, the photographs kindly supplied to me by Dieter Arnold of the Metropolitan Museum show these items to be of a rough stone, hardly suitable for giving gold a polished finish.

Scheel (1985, 135 footnote 73) states that the Egyptians used a mineral (*ꜥꜣt*) to polish gold and silver. The particular type of mineral is not specified. Scenes of polishing from the 5th Dynasty Unas Pyramid at Saqqara (**map 4**) are shown in Hassan (1938, pl. 96; also shown in Scheel 1989, fig.42.), where it is labelled *snt*. It appears later in the tomb of Rekhmire at Thebes (**map 7**; Scheel 1989, 37, fig. 39). In no instances is it clear what sort of tool is used except that it is about the length of a finger. They could conceivably be these teardrop shaped flints.

A scanning electron microscope might detect traces of metal if these tools were indeed used as metal burnishers.

6. Funerary Palettes

Plates 4-5.

6.1 Description and dating

The name ‘funerary palette’ to my mind best approximates to the possible function of these artefacts, though I would prefer to see their function as uncertain and perhaps even various. Individual examples of the type have been described as a ‘writing palette’ (Petrie 1927, 63, 56.9), ‘ink slab’ (Petrie 1903a, 80; Petrie 1909b, 29) and ‘Rasierklinge oder Kratzer’, ‘razor or scraper’ (Schoske *et al*. 1990, 116 no 94).

The classification includes all four-sided extremely regular rectangular flint artefacts with trapezoidal cross-section and invasive retouched short ends. All examples, except UC59563 (**plate 4.2**), are polished. Since UC59563 is not only unpolished but also has about 5% cortex, it may be unfinished.

Few examples are known so I give individual measurements: The largest of which I am aware measures 134 x 59mm (UC11771, **plate 4.4**). Other Petrie Museum examples measure 65.8 x 48.6 x 13mm (UC59563) and 59.5 x 37.8 x 6.6mm (UC59564, **plate 4.3**). Within this group one may also place a similar chert palette from Abydos (**map 4**; Petrie 1903b, 30–31, pl. 14. 292; Petrie 1927, 63). The illustration suggests it measures 110x35mm. This example is very slightly irregular in shape. Berlin 22842 (Scharff 1931, 63 pl. 5. 106; 1990, 116 no 94; **plate 4.1**) measures 65x24mm. This example, said to be unprovenanced, is assumed by Scharff to be 4th Dynasty in date (this date is perhaps chosen because of the similarity to metals forms in the tomb of Hetepheres). There is also an example seen by the author (September 2007) in the Kharga Oasis Museum (accession number 577, **plate 5.1**) from Tell el-Dabʿa which measures 90mm in length – information on length and source kindly supplied by the museum director Mahmood Yusaf (Sept. 2007). Tell el-Dabʿa dates from the First Intermediate Period to the Second Intermediate Period. One might even include within this group the four ‘paint slabs of hard crystalline limestone’ found in the tomb of Tutankhamun (Murray and Nuttall 1963, 32o; **plate 5.2**) varying in length from 78–81mm. It is possible that these are also flint.

UC59564 is provenanced and comes from Old Kingdom Koptos, (**map 6**; according to the Petrie Museum records). UC11771 (Petrie 1927, pl. 56.9; Petrie 1903a, 80 fig. 48; **plate 4.4**) bears the throne name Djedkare (a 5th Dynasty king) and

was found in a pottery jar at Dashur. There is also an example from south of the store chambers of the 4th–5th Dynasty temple of Abydos (**map 4**; Petrie 1903b, 30–31, pl. 14. 292).

To complicate matters of classification, similar items are known in Egypt in stone other than flint belonging to the 9th–12th Dynasties (discussed below) and several 'palettes' are known from Byblos in Egyptian levels, again in materials other than flint.

Dunand (1954 II, Text, 516 no. 123600, 517 no. 12383, 520 no.12405, 928 no. 17521, 1046 and 1076, no. 19256) describes palettes at Byblos in various non-flint materials, including marble, schist, sandstone, etc. These examples date to the late third to early second millennium BC and the layers included large numbers of Egyptian artefacts. These have the same overall shape as the flint palettes, and some have indentations in the larger plane (Dunand 1954 II, Text, 520 no.12405; 928 no.17521), while others do not. Sizes are broadly comparable with the Egyptian examples. The examples with indentations measure: 66mm wide by 20mm deep (this item, no. 12383 is broken in half); 132x85x33mm; 53x43x8mm. The example without indentations measures: 108x61x18mm (no. 123600). Those with indentations look like the writing palettes found in Egypt.

6.2 Function

I have tentatively called these items 'palettes', given their similarity in form to grinding palettes in materials other than flint. They are also classified as 'palettes' in the Petrie Museum catalogue. However, their function is not straightforward and, as stated above, Berlin 22842 is described by Scharff (1931, 63 pl. 5. 106) and Schoske *et al*. (1990, 116 no 94) as a razor or scraper ('Rasierklinge oder Kratzer').

The greatest drawback to seeing these as functional writing palettes is their lack of indentation in the larger side. Palettes of a similar shape, of various materials including diorite, quartzite, limestone, etc., date to the Old – Middle Kingdom e.g. Petrie UC18120, UC31347, UC34505, UC51741 usually have an indentation on the larger face for holding pigment. However, Predynastic–Early Dynastic cosmetic palettes of very different shape do not always have indentations suggesting that this was not always functionally necessary, at least for cosmetic palettes.

Size may also make this group dissimilar to the functional writing palettes. Of the Petrie Museum examples with indentations, UC18120 measures 81mm long; UC 31347 measures 115.5 x 68.5mm (information Petrie Museum web site, the

measurements of the others are not given). Of the flint examples, only UC11771 is of a comparable size. However, the flint examples may be smaller because they are non-functional copies.

One might also suggest that the flint examples are unlikely to function as writing palettes because of their smooth surface. This would have made grinding pigments difficult. However, slate cosmetic palettes are similarly smooth and glass mullers are used today for grinding paint.

Petrie (1927, 63) suggests that the non-functional 'chert' type of the 5th Dynasty later developed into the non-functional 12th Dynasty examples of writing palettes placed in tombs, usually of black stone. Petrie illustrates a quartzite example of the 9th–10th Dynasty example (Petrie 1927, pl. 56.19). This theory would make sense, though if the Tutankhamun examples belong to the same type, the group may be more long-lived than Petrie thought.

One might slightly adjust Petrie's suggestion and state that while these are indeed palettes, they may have been used for grinding eye make-up rather than as scribal palettes. Eye make-up palettes of alternative forms are common in Early Dynastic tombs.

It is also possible that these artefacts performed a similar function to the so-called flint 'razors' formed from unpolished blades (see below and **plates 17-18**). There is a strong morphological similarity, though these polished 'palettes' are generally bigger than the 'razor' examples and additionally the inward slope of the opposing ends are more invasive in the palettes.

However, the palettes appear more like metal 'razors' than the unpolished flint forms. Both metal 'razor' and palette emerge in the Old Kingdom, around the 4th-5th Dynasty (though the metal example from the Brussels Royal Museum of Art and History E5914 (Warmenbol 2002, 131) is 9th–10th Dynasty. The inward sloping opposing short ends of the palettes resemble the metal forms (e.g. Kromer 1978, 43, pl. 16.5; Berlin 18859, Scharff 1931, fig. 16; Schoske *et al*. 1990, 116 no. 93; Brussels Royal Museum of Art and History E5914, Warmenbol 2002, 131; **plate 4.5**). Palettes are also, like the metal examples, straight edged on the shorter sides while the unpolished 'razors' may be either convex or straight. The size of the metal 'razors' are 85 x 35 x 5mm (Warmenbol 2002, 131); 80 x 35mm (Schoske *et al*. 1990, 116), which is closer to the polished flint 'palettes' than to the flint 'razors'. The largest of the latter measures c.70 x 30mm (e.g. M6772C). Finally, like the metal examples (Berlin 18859 Schoske 1990, 116 no 93; Brussels Royal Museum of Art and History E5914

Warmenbol 2002, 131), one polished example (UC11771) is inscribed with the name of a king. As noted above, the Berlin example published by Scharff and Schoske is orange/yellow. The examples from the tomb of Tutankhamun were said to be yellow-brown. Tillmann (1992, 160) has suggested the colour of the 'razors' may be paralleling the metal forms. However, the Petrie Museum UC11771 and UC59564 are both made from a pink/brown flint and UC59563 from a mid-brown flint. One might even go so far as to suggest that the shiny metal forms were copying the shiny hue of the flint forms, either the flint unpolished 'razors' or polished 'razors'

There is a further problem in that we cannot be sure of the purpose of the metal 'razors' and indeed Schoske *et al*. (1990, 116, no.93) describes a metal form as 'Rasierklinge oder Kratzer'). A number of metal examples were found with other toiletry articles in the tomb of Queen Hetepheres. This does not prove however, that they are razors. The metal – gold and copper alloy – suggests they may have been too blunt to function as razors. Or, at least, it seems likely that unretouched flint would have been better at this function. One might say, of course, that these are non-functional copies.

To conclude, the function of the palettes is debateable. While they may bear a morphological similarity to other tools they could have a very different function. Given their different sizes and possibly dates, the type may even have had several functions. The shape of Berlin 22842, being narrower than some of the other palettes, perhaps bears the closest resemblance to the metal razors. Other examples look more like the scribal palettes. However, that these items are 'special' is likely given the extra effort expenditure of polishing. The idea that these are special is enhanced by the inscription on UC11771. One would not expect a purely utilitarian tool to be engraved with the name of a king. Furthermore, that these are funerary rather than 'everyday' increases their chance of being non-functional.

7. Blades

Plates 5-27

7.1 Summary

One can see 3 types of blades from Dynastic Egypt which were used, either as tools in their own right, or as preforms for other tools: broad, narrow, and irregular (these are discussed in more detail below). I also tentatively discuss an intermediate sub-type which is very similar to the broad type. The types overlap but there does seem some justification for studying each group separately. Narrow blades in particular stand out

as a distinctive group, and are the most common type. From the early Dynastic onwards blades seem to get more irregular, shorter and wider.

Here, I first examine general chronological trends based on largely unretouched blades and then look at the four categories, again based on largely unretouched blades. I then examine the different categories which appear to be derived from these blades.

In earlier publications 'blades' are sometimes called 'flakes' or occasionally 'knives'. Blades are here defined as long narrow flakes with almost parallel lateral edges (the degree of parallelism is subjective, but the length, when complete, must be greater than twice as long as the width). Various scholars divide microblades from blades based on size (e.g. Tixier 1963). However, there appears no consensus (Owen 1988, 2–3), therefore here blades and micro-blades are categorized as a single group. If the blade cannot be defined with more precision, e.g. endscraper, rectangular segmented blades, etc. the term 'blade' is simply used. For incomplete pieces blades/flakes it is often to distinguish between blades and flakes. This is also the case where the item has been retouched, thus obliterating its original shape.

Generally, blades seem to be a strong component throughout the Dynastic Egyptian flint industry. For example they appear particularly dominant at Old Kingdom Elephantine (**map 8**; Hikade 2002) and Middle Kingdom Lahun (**maps 4 and 5**; see the database of flint in British museums, **Appendix 2**, wherein blades make up over half the items from the Early Dynastic to the New Kingdom). The specialized blade industry seems to have continued until the New Kingdom, though with a decline in standardization and at some sites a possible increase in flake manufacture is suggested. James Harrell has recently discovered a blade manufacturing site of the Ramesside Period at Wadi Umm Nikhaybar (James Harrell pers. comm.). Graeco-Roman blades were also apparent from Tuna el-Gebel now in the museum at Mallawi museum (e.g. accession number 402–409, seen by the author in September 2007; **plate 20**), dated, according to the label and the catalogue (Messiha and Elhitta 1979, 19). However, one of the blades (**plate 20.1**) looks very much like a 'razor' which may suggest that these blades are intrusive to the Graeco-Roman levels.

The percentage of blades to flakes seems to decline during the New Kingdom. It is possible that the increase of flakes on New Kingdom sites such as Amarna (**maps 3 and 5**) perhaps reflects the growth of local industries, and/or or a decline in general skill levels.

Various types of flint seem to have been used for blade manufacture. For example, tabular flint was used for making blades at Giza (**map 4**; Conard 2000, 25).

Tillmann (1992, 60) reports the use of nodular flint and 'Schotterfuerstein' (gravel flint) at New Kingdom Qantir (**maps 3 and 4**).

Blades in British museum collections are usually trapezoidal and secondarily triangular in cross-section. This is also the case for excavated material e.g. Pawlik (2005, 197). Blades with two or more dorsal ridges are easier to fix to a haft due to the larger surface area (Pawlik 2005, 198).

The methods of manufacturing regular prismatic blades are well discussed in lithics literature (for example: Crabtree 1968; Clark 1982, 1985; Hay and Rogers 1978). Within Egyptology, Midant-Reynes (1983, 261) believes that long narrow blades were produced by pressure flaking, the latest examples of which come from Late Old Kingdom ʿAyn-Asīl (**map 3** and see below). It has been stated that the size and shape of a blade varies according to whether the method of production is direct percussion, indirect percussion or pressure. However, the attributes for each mode are far from clear (Owen 1988, 4–7). Newcomer (1975) states that all that can be distinguished is whether hard or soft hammer, or pressure flaking is used.

Blades are usually found away from their main production area (with the exception of blades found at Meidum).

7.2 The Three Main 'Groups'

Dynastic Egyptian blades fall generally into three discrete categories:

- broad, flat blades with an almost rectangular shape, usually with a trapezoidal cross-section. The blades exhibit core preparation at the proximal and possibly core preparation, or more likely retouch, at the distal ends giving a rounded appearance to the blade. Examples can be seen on **plate 8**.
- narrow teardrop shaped blades, exhibiting a high degree of curvature, usually with a triangular cross-section. The proximal end is the thickest. The type shows platform preparation. Examples can be seen on **plate 10** and also include L56.20.72 and UC20003, M4825 (**Appendix 2**).
- A group which do not fit the above and tend to have an irregular shape exhibiting little core preparation. Examples are shown on **plate 7**.

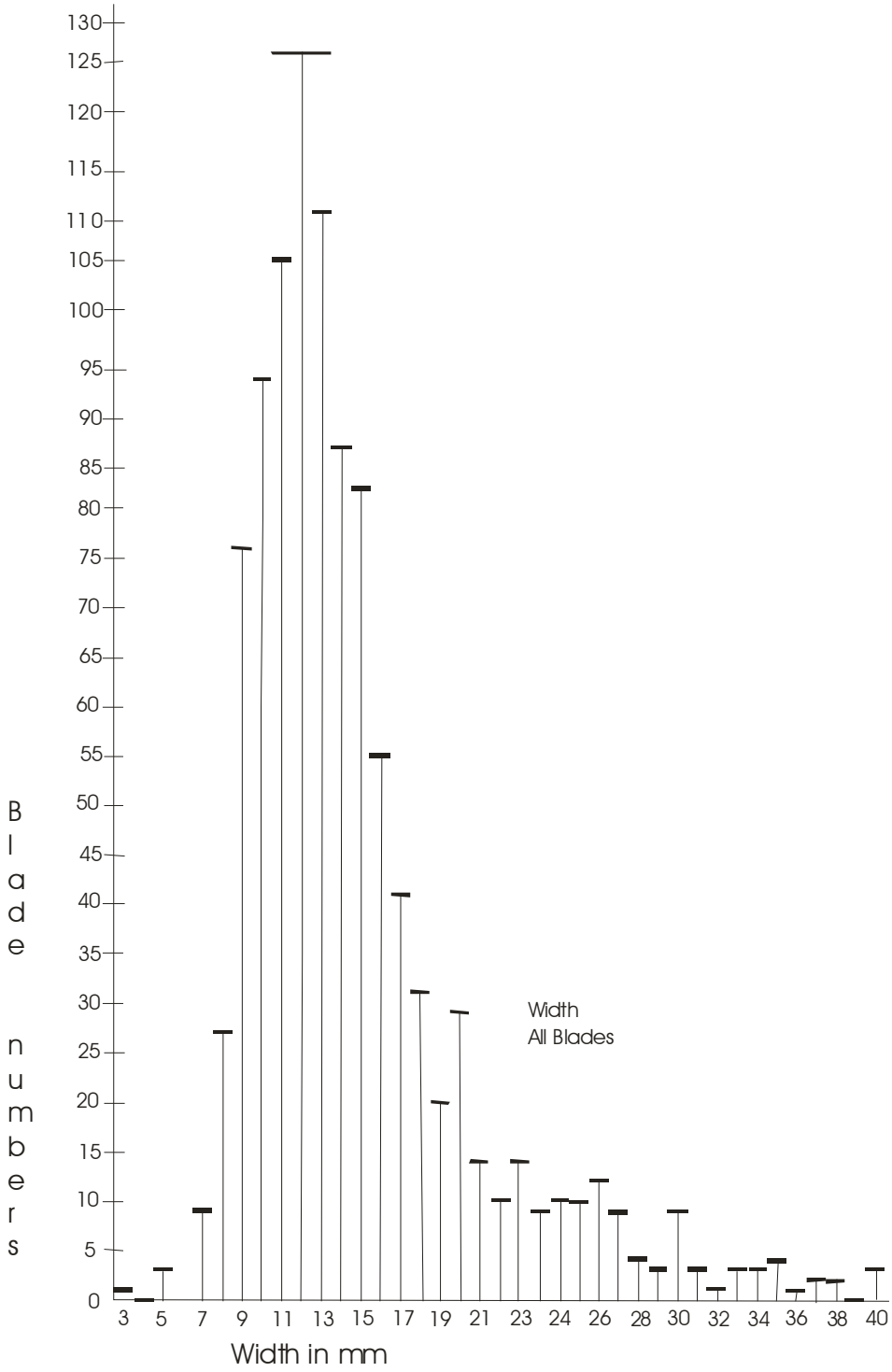
One might also add a group which I have called 'intermediate', in that they exhibit platform preparation but are in width between the narrow and broad group. Examples include M5169C, and others **plate 9**. A number of the intermediate cases are

wide but have a teardrop shape e.g. L1973.2.269A-F, all from Middle Kingdom Lahun (**maps 4 and 5**; **Appendix 2**).

Caton-Thompson (Caton-Thompson and Gardner 1934, 127–128) also record the narrow teardrop shape and broad rectangular blades on Early Dynastic and Old Kingdom sites. They classed the pointed types as 'Narrow long plain blades with pointed tips' and the broad and intermediate type as 'rectangular flakes'. The latter they subdivide into the 'plain' type and those with 'basal notches'. They included 'razors' in the same category as the 'rectangular flakes, plain', while I have categorized them separately, though believe that the razors were made from these types of blades. Emery and Saad (1938, 18–19, fig. 5, pl. 11) classified the broad and intermediate group into 3 types which seem to be based on shape. They included razors in the group.

Distinguishing three groups

There is of course overlap with all three groups. If we consider the width of all blades in British museums (**graph 1**), except the irregular ones, there is a distinct group which stands out, ranging from about 8 to 19mm in width. These I have categorised as narrow blades'. The rest are either broad or intermediate or irregular.



Graph. 1. Widths of all blades in British museums

The lengths and widths of the broad and intermediate blade types, as will be seen below, overlap, as it is the length to width ratio which determines if the blades are broad, intermediate or narrow. Complete broad blades have a length divided by width ratio of less than 4.5, intermediate blades of less than 6. The broad group appear more regular. The division is arbitrary, in that it could be argued that these should be kept as one group, with a continuum from one to the other. Nevertheless, the fact that it was

mainly the broad group that could be used to manufacture ‘razors’, plus the fact that the broad group appear earlier suggest that the separation may be justified. In the past, in museum catalogues, for example, both groups were classed as ‘double endscrapers’. This is a term also applied to the ‘razors’ discussed below. Indeed, there is overlap between the two and for those which appear between ‘razors’ and complete intermediate or broad blades, I have classed as ‘intermediate’. These are discussed separately below.

The database of material from British museums, plus published material, shows that irregular blades are found throughout the Dynastic period but seem more prevalent from the New Kingdom (**table 1**). While New Kingdom blades from Wadi Umm Nikhaybar appear to be reasonably regular they do not compare with the broad flat blades or narrow teardrop shaped blades in regularity.

When drawing up the database, an attempt was made to judge if partial and complete blades belonged to the broad flat type, the narrow teardrop shape, the intermediate type or the irregular shape. This was not possible for all blades due to the small size of some examples relative to the size of original blade. Where a substantial amount of the blade remained an attempt was made to judge by eye if they were broad, intermediate, narrow or irregular. Thus, there was a certain amount of guesswork. Nevertheless, the database did produce certain patterns.

Period	Number	Broad	Intermediate	Narrow	Irregular
Early Dynastic	167	50 (29.94%)	13 (7.78%)	90 (53.9%)	14 (8.4%)
Old Kingdom	320	32 (10%)	20 (6.25%)	267 (83.43%)	1 (0.31%)
Middle Kingdom	153	1 (0.66%)	30 (19.6%)	114 (74.5%)	8 (5.2%)
New Kingdom	32	0	4 (12.5%)	12 (37.5%)	16 (50%)

Table 1 : Blade types based on material from British museums

The proximal ends of the broad and intermediate blades show core preparation. The distal ends are also often shaped. It is usually stated that this is distal retouch. However, on viewing refitted examples, it seems that if it is distal retouch, it is only slight and there is a possibility that this is distal core preparation. Thus, in cataloguing such items in British museums, these blades were considered ‘complete’.

From 16 unretouched 'complete' broad blades measured in British museums, it was calculated that the broad type have a range length of 75-116.9mm, mean length of 90.02±15.51mm, a range width of 14.9-33.8mm, mean width of 24.94±5.04mm and a mean thickness of 6.74±1.89mm. Broad blades have very little longitudinal curvature. Longitudinal curvature proved difficult to measure as long blades would have a higher angle height making this easier to measure than for short blades and thus biasing results, and also as curvature differed along the length of a blade. Thus, comments on curvature in the database are a result of my own opinion on seeing a number of examples rather than actual measurements. Tillmann (1998, 265) suggests the type originates in Palestine. Broad rectangular blades are particular common in the Early Dynastic and Early Old Kingdom and almost non-existent after the Old Kingdom. Very occasional broad rectangular shaped blades come from Middle Kingdom Lahun (**maps 4 and 5**; e.g. L56.20.52).

There were 29 complete unretouched intermediate blades measured from British museums. These gave a range length of 67-115.8mm, mean length of 84.64±14.85mm and range width of 13.6-24.3mm, mean width of 17.44±3.9mm and mean thickness of 5.59±2.2mm. Like broad blades, the intermediate type have little longitudinal curvature.

Replication experiments by Sollberger and Patterson (1976) suggest that indirect percussion is most likely to produce wide blades. The regularity of the broad and intermediate types would be most easily produced by indirect percussion (Whittaker 1994, 223).

Narrow blades have a high degree of curvature, particularly at the proximal end[3]. 151 narrow complete blades were measured from British museums. They had a range length of 14.9–193mm, mean length of 75.47±18.45mm, range width of 8.9–29.8mm (though only 4 examples measured over 20mm wide), and mean width of 13.52±3.89mm and mean thickness of 4.28±1.53mm. Since the narrow type are teardrop in shape, the mean width and thickness differed greatly from proximal to distal ends. The measurements were medial. The general narrowness of this type, plus the fact that the blades taper would make them unsuitable for manufacture of razor blades. Narrow, teardrop blades continue from the Early Dynastic to the Middle Kingdom. They are extremely common at Gurob, Lahun (**maps 3, 4 and 5**), etc. The

[3] Andrefsky (1986) discusses curvature and most notably its connection with stages in reduction. Sollberger and Patterson (1976, 525) show that a number of variables contribute to curvature including type of flint, anvil type and other variables.

New Kingdom narrow type in the table above largely come from one site, that of Gurob.

The morphology of these narrow blades would suggest pressure flaking, and this is indeed what has been suggested (Midant-Reynes 1983, 258–259). Tixier (1984, 66), quoted, in French in Conolly (1999, 25) says that while one cannot be certain as to whether or not pressure flaking takes place there are four indicators of it:

- parallel sides and rectilinear arrises
- consistently thin in the middle part without abrupt variation
- without pronounced ripples on the ventral side
- the bulb is always narrower than the maximum width, which soon reaches its maximum

Crabtree (1968, 451) also adds 'tiny platforms' to the list of variables suggesting pressure flaking. The pronounced bulb of the later ones may suggest hard hammer, though this deduction is by no means certain (Andrefsky 1998, 115–116). Yet, the smallness of the platform would make direct percussion difficult, which would suggest pressure flaking. Blade removal from the core is seemingly (from the evidence of the rippling on the blades) also unidirectional, a factor which is in keeping with, though not exclusive to) pressure flaking (Inizan *et. al*. 1999, 78). However, a note of caution: it is difficult to differentiate a pressure flaked piece from soft hammer (Andrefsky 1998, 115; Andrefsky 2001, 7–8). Also see also Owen (1998, 3–7) for a summary of work on whether or not mode of removal from the core can be identified by flint attributes.

It would appear that although the narrow type are similar in morphology, after the Early Dynastic Period, blades get wider and thicker. The results are given for blades in British museums. The small number of blades which were complete longitudinally makes the length difficult to compare:

Period	**Number, all (number complete blades)**1	**Mean length**	**Mean medial width**	**Mean medial thickness**
Early Dynastic	90 (28)	73.97±14.46mm	12.2±2.89mm	4.03±1.28mm
Old Kingdom	267(48)	79.02±17.11mm	11.22±2.50mm	3.43±1.26mm
Middle Kingdom	114(25)	81.91±16.85mm	13.41±2.67mm	4.2±1.43mm
New Kingdom	12(2)	66.7±10.7mm	15.85±8.96mm	4.56±2.34mm

Table 2 : Narrow blades by period
Number of complete blades is given in brackets. Only complete blades were used to calculate length

Material from British museums illustrates that irregular types were particularly common in the New Kingdom. Additionally, New Kingdom irregular blades are illustrated from Thebes West (**map 7**; Debono 1971, pl. 184).

As will be discussed below, there are examples of the broad type refitted, sometimes together with the intermediate type. The broad type and some of the wider, longer examples of the intermediate could be used to manufacture razors. Indeed refit has shown that they were used for this purpose. The narrow teardrop shapes are used to manufacture pointed blades. All types are used to manufacture sickle blades, though the narrow types are more commonly used (discussed below under sickle blades). As is also stated below, all types may have been used as tools in their own right.

Incomplete blades were either snapped (segmented), or were truncated (exhibiting abrupt retouched). Some examples seem to be snapped at one end and truncated at the other. It seems that segmentation became increasingly common from the Middle Kingdom (see below).

7.3 Unretouched Blades – General Trends

This section deals with complete, unretouched blades, which as stated above belong in three main groups. It is not always easy to distinguish between core preparation and retouch at proximal and distal ends of blades. This has lead, in some cases to probably unretouched blades with a pointed proximal end being assumed to be retouched (see below in **Section 7.4.7** for a discussion of this). This is not only the case for pointed blades but the other main carefully shaped group, that of the broad rectangular types and the intermediate group (discussed in more detail below). In my database of flints from British museums I have assumed borderline cases to be unretouched.

There are more unretouched blades than retouched blades in museum collections. Tillmann (1992, 60) also records 99 for New Kingdom Qantir (**maps 3 and 4**) and 147 for Middle Kingdom Tell el-Dabʿa (Tillmann 1992, 131). Blades from New Kingdom western Thebes (**map 7**; Debono 1971, 43, pl 184), which Debono states as being of a high quality, were accompanied by crested blades, suggesting that they were made on the spot.

Until recently it was often assumed that all unretouched blades were not tools, a situation which is clearly not the case (Jensen 1986, 19). The majority of blades from Mesoamerican assemblages, for example, were used without modification (Johnson 1987, 10). Of course, a percentage is of unretouched blades is also probably debitage. Ashmolean 1893 1–41 931 is a group of 7 blades from Amarna (**maps 3 and 5**)

without retouch. The fact that these also have cortex may suggest that they may be waste blades, though Egyptian material frequently has cortex remaining on finished tools. BM EA 67621, for example, retains traces of mastic which suggests hafting. Ashmolean 1914.775 from Middle Kingdom Harageh (**map 4**) is worn at the proximal end suggesting use. The high number of unretouched blades on sites such as Lahun (**maps 4 and 5**) and Buhen (**map 9**) suggest that the production of blades was an end in itself. While it is possible that it was intended to modify them later, the range of areas in which they are found suggests that they were often used in an unretouched state. Thus, some unretouched blades are certainly tools in their own right. Since microscopic examination for wear analysis was not possible for this thesis it could well be that many other complete blades were also used. It is also possible that at least some are preforms. Evidence for this comes from the existence of refitted unretouched blades and retouched 'razors' coming from the same core (see **7.4.4**). The fact that many lithics come from funerary sites may explain both the lack of actual wear and also could argue for these items being preforms. Indeed, some Early Dynastic mastabas are known to have unworked flint nodules within their magazines (Emery 1954 II, 66-68), suggesting that raw materials, and by extension performs, could be placed in graves. However, as will be shown, a number of unworked blades also occur on settlement sites. This does not exclude their use as preforms though one might not expect such a large percentage of unretouched blades unless some were tools.

It seems from published work by Tillmann, plus my own measurements of material in British museums, that generally unretouched blades become shorter and wider, and that the Second Intermediate Period to the New Kingdom shows a particularly marked change, despite the fact that this was a short time scale. This is in line with the trend of other 'blade tools', i.e. retouched blades, such as sickle blades (discussed below). There are of course anomalies. This general tendency is despite the fact that broad regular blades cease to be manufactured from the Old Kingdom (see below).

Site (period)	Number	Mean length (mm)	Mean width (mm)	Mean thickness (mm)	Data source
Hemaka 1st Dynasty	69	93.76±21.02	18.5±4.41	----------	Emery (1938)
Abydos 1st Dynasty	20	71.1±16.86	15.5±4.63	5.5±0.97	Spencer (1980)
Saqqara 1st Dynasty	14	76.5±17.94	18±6.51	----------	Spencer (1980)
Abydos, Early Dynastic	14	79.02±10.68	14.99±2.89	4.72±1.61	British museums
Qua Early Dynastic	16		14.98±4.85	4.73±2.07	British museums
Buhen Old Kingdom	288 (47 complete)	48.77±19.65 (74.39±10.12mm)	11.26±2.37mm (13.25±2mm)	3.45+1.14mm (4.23±1.14mm)	British museums
Tell el Dab'a Middle Kingdom	19	68.31±16.60	16.85 ± 3.51	4.73±1.30	Tillmann (1992)
Harageh Middle Kingdom	98 (13 complete)	58.58±15.75mm (81.54±7.31)	14.08±86mm (14.14±1.85mm)	4.19±1.1mm (4.7+0.88mm)	British museums
Tell el-Dab'a 2IP	40	60.40±7.48	17.62±5.43	5.21±1.84	Tillmann (2004)
Qantir New Kingdom	90 (35 complete)	65.32 ± 17.66	19.03 ± 7.35	7.02±3.08	Tillmann (1992)
Gurob New Kingdom	9	67.4±11.84mm	13.77±2.96mm	3.9±0.0mm	British museums
Amarna New Kingdom			19.66±4.43mm	7.24±1.75mm	British museums

Table 3: Unretouched blade measurements

Measurements for complete as opposed to segmented blades are given in brackets.

Albert (1985, 110) also uses the relative thickness ('relativen Dicken-index'), which he expresses as:

$$RDI = \frac{100 \cdot D}{0.5 \cdot (L+B)}$$

D (der Dicke) is the thickness, L the length (die Länge) and B the width (die Briete). This is also used by Tillmann (1992, 185, fig. 125) who shows that blades get thicker from Middle Kingdom Tell el-Dabʿa to New Kingdom Qantir (**maps 3 and 4**). This can only be calculated using complete blades as to include broken blades may distort

the results. Calculating width in relation to thickness could overcome the problem. The results of this appear in the main body of the thesis (**volume 1, Chapter 3**).

James Harrell states (pers comm.) that the Ramesside blades from Wadi Umm Nikhaybar are around 6cm long.

More detailed information on calculations of measurements for each period is given below, where deemed necessary.

The following discussion suggests there is little difference in measurements between retouched and unretouched blades giving weight to the idea that the unretouched versions may simply be unfinished versions of retouched types:

7.3.1 Segmented unretouched blades

Plate 12

A large number of unretouched blade segments come from Old Kingdom Buhen (**map 9**) and Middle Kingdom Harageh (**map 4**), and to a lesser extent from other sites. These do not exhibit sickle gloss and are largely narrow blades. They appear to have been snapped rather than truncated. The high percentage without gloss suggests that these were not simply unused sickle blades. It is possible that the segmented blades were simply broken sections of the complete blades found on the sites. That is, both complete and segmented blades had been used for a similar purpose. The width and thickness in both complete and segmented blades is similar suggesting derivation from the same original population.

	Mean Length	**Mean Width**	**Mean Thickness**	
All Blades 288	48.77±19.65mm	11.26±2.37mm	3.45±1.14mm	
Complete Blades 47	74.39±10.12mm	13.25±2mm	4.23±1.14mm	
Segmented Retouched Blades 23	42.5±16.33mm	11.52±2.23mm	3.25±1.07mm	
Segmented unretouched Blades 218	43.52±17.05mm	10.84±2.25mm	3.25±1.07mm	
Table 4 : Old Kingdom Buhen (British museum material)				

The question then is, are segmented blades unfinished sickle blades. Sickle blades are also discussed separately below:

288 blades were identified from Buhen (**map 9**). 241 were segments. Only 23 were retouched laterally and only 3 of these exhibited gloss. The measurements for the

three sickle blades from Buhen was 54.8x14.6x5mm, 53.8x19.3x5.6mm and 56.2x12x3.6mm making them longer than the average Buhen segmented blade but not significantly so. The sickle blades were segmented and retouched laterally. Both complete and segmented blades were retouched

There were 98 blades from Middle Kingdom Harageh (**map 4**). Of the 30 retouched blades, 15 were sickle blades. 13 were complete. Again the measurements suggest that the segmented blades could be unused sickle blades.

	Mean Length	**Mean Width**	**Mean thickness**	
All Blades 98	58.59±15.75mm	14.08±3.86mm	4.19±1.1mm	
Complete Blades 13	81.54±7.31	14.14±1.85mm	4.7±0.88mm	
Sickle Blades 15	60.02±14.19mm	14.19±1.99mm	4.04±0.75mm	
Segmented Retouched Blades 30	59.94±12.73mm	13.65±2.7mm	4.09±1.1mm	
Segmented Unretouched Blades 55	57.47±15.99mm	14.18±4.36mm	4.18±1.08mm	
Table 5 : Middle Kingdom Harageh (British museum material)				

7.3.2 Early Dynastic

Emery and Saad's types 9 and 10 in the tomb of Hemaka probably equate to unretouched blades (1938, 18, fig. 5, 23, 24, pl.11) though Spencer (1980, 91, footnote 6) equates Emery's 9 and 10 with his pointed blades. Since there are very few pointed blades exhibiting retouch (see **Section 7.4.7**), I include them here among the unretouched blades, though also discuss them separately below. I did not include Emery's types 11-13, as the illustrations suggested that a number of these could have included clearly retouched 'razors'. Emery's publication listed 69 type 9 and 10. I give the results below deleting Emery's number 192. I assumed the measurements of catalogue number 192 to be a mistake as they were given as 101x95mm (Emery 1938, 25). Since, as is shown on the section on razor blades, the mean width of razor blades from this site is 24.93±3.75mm, very few pointed blades could have been used to manufacture razors for this tomb. However Emery lists 6 which were above this width.

Blades from Early Dynastic Qua in British museums were measured and the few complete examples were between and 65.6mm 108.7mm long. Other measurements are given in **table 6**.

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Hemaka 1st Dynasty	69	93.76±21.02mm	18.5±4.41mm	----------	Emery and Saad 1938, 11
Abydos 1st Dynasty	20	71.1±16.86mm	15.5±4.63mm	5.5±0.97mm	Spencer 1980
Saqqara 1st Dynasty	14	76.5±17.94mm	18±6.51mm	----------	Spencer 1980
Abydos	14	79.02±10.68mm (1.)	14.99±2.89mm (1.)	4.72±1.61mm (1.)	British museum material
Qua	16		14.98±4.85mm (1.)	4.73±2.07mm (1.)	British museum material

Table 6 : Early Dynastic unretouched blades

measurements were taken at the medial point along the blades

7.3.3 Old Kingdom

ʿAyn-Asīl (**map 3**) is dated from end of Old Kingdom to 1st Intermediate Period (Midant-Reynes 1998, pl 14). The blades illustrated are incomplete but measure between 7.7 and 9.5cm.

7.3.4 Middle Kingdom

For 2nd Intermediate Period–19th Dynasty Tell el-Dabʿa area A/V, Tillmann (2004, 361) had 40 unretouched blades out of a total of 132 flint artefacts. These have a mean length of 60.40±7.48mm; a mean width of 17.62±5.43mm and a mean thickness of 5.21±1.84mm. For an earlier study of Middle Kingdom Tel el-Dabʿa more generally, 19 complete blades produced a mean length 68.31±16.60mm (Tillmann 1992, 131). The mean width at half length for 147 blades was16.85 ± 3.51mm (Tillmann 1992, 131) and mean thickness 4.73±1.30mm (Tillmann 1992, 131). Unretouched blades are also discussed and illustrated from Middle Kingdom Karnak (**map 7**; Lauffray 1980, 50, fig. 19 801, 750, 823). The illustrations suggest they are around 10cm long.

7.3.5 New Kingdom

Blades from the New Kingdom appear to include a number of irregular forms, for example from Qantir (**maps 3 and 4**; Tillmann 1992, fig.5, 7.1-2). From British museums

A number of narrow unretouched forms are also known, for example from Qantir (Tillmann 1992, 7.4-5) and from British museums from Gurob (**maps 3, 4 and**

5; M507i-ix). Of the 9 narrow blades from Gurob have a mean length of 67.4±11.84mm, a mean width of 13.77±2.96mm and mean thickness of 3.9±0.0mm.

Tillmann (1992, 61) had 35 complete blades from New Kingdom Qantir giving a mean length 65.32 ± 17.66 mm. The widths of 90 blades were measured at their medial point giving a measurement of 19.03 ± 7.35 mm (Tillmann 1992, 61-62). Finally, the medial thickness of 90 blades was 7.02±3.08mm (Tillmann 1992, 61).

12 unretouched blades from New Kingdom Amarna (**maps 3 and 5**) from British museum were measured. Since few were complete an average length was not taken but they ranged between 16.4mm and 23.9mm. The mean medial width was 19.66±4.43mm and the mean medial thickness was 7.24±1.75mm.

7.4 Retouched Blade Groups

Retouched blades, like unretouched blades, tend to be prismatic. They may be morphologically divided into:

- Complete blades with lateral retouch
- Segmented blades with lateral retouch
- Truncated triangular blades
- Bitruncated blades
- Pointed blades
- Long, narrow notched blades

There are also sickle blades which tend to be either segmented blades with lateral retouch or bitruncated blades (sickle blades are identified as such by hafting or sickle gloss). However, I have chosen to discuss sickle blades as a separate category because of their importance to the Egyptian economy and because one might argue that typologies constructed relating to function are as significant, if not more significant, as those relating to morphology.

Some of these groups share a significant number of characteristics with sickle blades. In any population one would expect there to be a number of only partially used items and thus these could well be sickles. However, here I have erred on the side of caution and only categorized blades with gloss as sickles (see below). The fact that the majority of retouched blades, excepting the bitruncated pieces, appear to be sickles together with the fact that the segmented blades are also, like the sickles, denticulated, suggests that at least this latter group are probably unused sickles.

7.4.1 Complete blades with lateral retouch only

Plate 13.

Of those blades measured in British museums, 17 complete blades were recorded with lateral retouch. These comprised a mixture of narrow, intermediate and irregular types. Retouch was usually dorsal and dating was from the Early Dynastic to Middle Kingdom. Retouch is usually irregular and may be confused with trample.

Examples

Lauffray (1980, 50, fig. 19. 882) illustrates an example from Middle Kingdom Karnak (**map 7**). Occasionally, complete blades with lateral retouch may appear as sickles e.g. M3557 from Early Dynastic Koptos (**map 6**). Usually, however, such blades are not used as sickles, for example, Ashmolean 1888.267/3 from Middle Kingdom Tell El-Yahudiya (in this case retouch is ventral). Ashmolean 1888.267/5 from Middle Kingdom Tell el-Yahudiya has steep dorsal retouch. Ashmolean 1893 1-41.931.41 (1 and 2) and BM EA55153 from Amarna (**maps 3 and 5**) again have irregular dorsal retouch. M244 from Middle Kingdom Lahun (**maps 4 and 5**) is a particularly large complete blade with lateral retouch

7.4.2 Segmented blades with lateral retouch and without gloss

Plate 14.

Segmented blades are those which are snapped at one or both ends. As stated above, it is not possible to tell if blades are deliberately or accidentally snapped. Some blades are snapped at one end and truncated at the other. Of the blades measured in British museums, 30 were segmented or segmented and truncated, 20 date to the Middle Kingdom. Their mean length was 49.4$\pm$18.37mm, their mean width at the medial point along the blade, 17.26$\pm$9.1mm and thickness 4.63$\pm$2.59mm. This makes a reasonable fit with the average sickle blade measurement, suggesting that this group could be unused sickles. Though one Late Period example (BM74743), and one Middle Kingdom example (BM67614) are much larger than most sickles. 15 of these, like the sickle blades, were serrated (e.g. UC7575Vii, M38154(5390K)). However, one might ask if the proportion of segmented blades with lateral retouch without gloss was still too high as to suggest that these were simply unused sickles.

A published example is known from Raven and Schneider (2001, 34, pl. 17) dating to the New Kingdom measuring 46x16x6mm. As this is unretouched at one end

and snapped at the other giving a rounded appearance to one end it is unlikely to be a sickle blade.

7.4.3 Truncated triangular blades, no gloss

Plate 15.

This is a small group consisting of distal ends of blades, truncated at the proximal end. One of Hikade's Early Dynastic Helwan (**map 4**) group (1999, fig. 3b) fits this group. It appears the same as Schmidt's 'triangular segmented blades' (Schmidt 1992, 83, fig. 3, 11–16) of which 7 are known from Early Dynastic Tell Ibrahim Awad (**map 4**) and one example only has gloss. BM EA67598 from Middle Kingdom Lahun (**maps 4 and 5**) which has serrations along one lateral edge also appears in this group.

7.4.4 Broad rectangular bi-truncated blades (razor blades)

Plates 16-18.

Commonly known as a 'razor blade' or more rarely a 'double-ended scraper' (for the latter see for example Spencer 1980, 96-98, pl. 76 nos. 709-730), these may also be called rectangular blades ('Viereckskingen' –Tillmann 1992, 159-163), 'Rechteckig breite Klingen' (Kromer 1978, 42–44, pl. 12) and 'Klingen-Doppelschaber (Kromer 1978, 44–47)[4]. Classifications often include the group which I have called 'intermediate bi-truncated'. Caton-Thompson (Caton-Thompson and Gardner 1934, pl. 81, nos. 20–36) distinguishes between 'convex ended flakes', 'rectangular flakes' and 'rectangular flakes, notched top'. The latter I would classify as 'intermediate bi-truncated'. Although sometimes classed as scrapers, they are not included in Hikade's (2004) typology of Chalcolithic and Bronze Age Egyptian scrapers and indeed one might argue that they did not function as scrapers. As their use remains enigmatic, any functional term must remain problematic. The term 'razor' blade has been likened to a 'nickname' (Schmidt 1992, 84; Hikade 2004, 58). Sometimes polished examples are included in this category (Schoske 1990, 116 no. 94) though I have preferred instead to call polished versions 'palettes' for want of a better name (see above). As is seen above, a number of classifications distinguish between the round and square ended-type, a distinction I have not drawn, as at least one example has one round and one square end.

The form is as follows: The blades are trapezoidal in section, extremely regular and usually broader than other categories of blades. The sum of the length divided by breadth should be less than 3.1, though there are problems with borderline cases (see

[4] Though his 'Klingen-Doppelschaber' includes examples I would class as 'Intermediate bitruncated'.

below). Although the blades exhibit extreme regularity, the distal edge is normally marginally thicker and wider than the proximal one, both terminal ends are semi-flat and can be either square or rounded (M7073H and M7073C even have one end square and the other rounded). See below, the rounded examples tend to be earlier. Proximal and distal retouch is apparent and more invasive than on other truncated blades. The bulb of percussion is sometimes removed (e.g. E5136). They measure between 4 and 7cm in length and between 2 and 3cm in width. Their width makes them at the extreme width of blades for any period in Dynastic Egypt. They seem to have been manufactured from the regular and wide blades often found in refitting groups (blades I have classified as 'broad' and 'intermediate' – see **7.2** above), e.g.M2242/11 from the Early Dynastic-Early Old Kingdom (see below in for an actual example of one refitting group which includes a razor). The angle height of the blade is usually very small, even immeasurable. These items have a smooth, almost polished appearance. Lateral retouch occurs infrequently and may represent reuse of the tool. Examples of lateral retouch include Pitt Rivers 1901.40.10, a 1st Dynasty example from Petrie's excavation of Djer's 'tomb' at Abydos (**map 4**; the section on use, below, gives further examples exhibiting lateral retouch).

This type of tool is found only in Egypt (Schmidt 1992, 84). Though Petrie (1920, 49) states that rectangular blades with square edges are found early in Nubia. No illustration is given therefore I am uncertain as to whether these are the same type. The fact that these items are geographically confined might suggest a symbolic purpose (**Volume 1, 54**).

One might wonder if these items were made of 'special' flint? It has been suggested, for example, that some of the yellow examples mirror the yellow colour of metals (Tillmann 1992, 162, though here Tillmann considers the polished type which I have categorized as a separate group). Kromer (1978, 46-47) states that Junker noticed a difference in colour in the round ended 'razors' found at Giza (**map 4**). All those found outside the graves at Giza were light to dark brown and those in graves yellowish-grey. Kromer (1978, 47) states that those he found in the Giza 'settlement' were light-dark brown. However, at Abydos (**map 4**) the local mid-brown flint with pinkish stripes was preferred (Hikade 2004, 58). Those I have examined from British museum collections which appear to come from graves include those which would be described as brown (e.g. PR1901.40.12 and PR1901.40.16), or in one instance even 'black' (PR1901.40.19). Thus, any colour differentiation may be limited to Giza.

Colour may be significant rather as an indication of available sources rather than as an indicator of the special nature of these artefacts.

Examples

The list is not exclusive. Published examples occur from the Desert Fayum (**maps 1, 3, 4 and 5**; Caton-Thompson and Gardner 1934, 128 pl. 81, 20–31). A number of 1st Dynasty examples were found in tombs at Abydos (**map 4**; Spencer 1980, 96–98, fig. 76 nos. 709-730; Peet 1914, 34, pl. 9, fig.1) and from the temple area apparently with votive deposits (Petrie 1903b, 26, pl. 8.139–140). Emery (1954 I, 63-64, 79); Emery (1954 II: 28, 68, fig. 9, pl. 34, type-6.) describes 127 examples from 1st Dynasty Saqqara (**map 4**) varying from 4.2 to 6.8cm from tomb magazines and subsidiary graves. One subsidiary grave (no.3504-12), that of a male, has a group of these together with pointed blades near the pelvis of the male skeleton (Emery 1954, 28, fig.9). This group has rounded ends. Schmidt (1989b, 307 fig.17, 7-13) shows straight-ended examples from the late Early Dynastic Tell el-Faraʿin (Buto) (**map 4**). Several 3rd Dynasty square ended examples are known from elite and royal graves at Bet Khallaf (**map 6**; Ashmolean 1896-908 E886-E889, Garstang 1903, 18, pls. 20 and 24). Convex ended tools from the same site date to the Early Dynastic (Schmidt 1989b, 301, fig. 15 no.4). Kromer (1978, 42–47, fig. 16, pl. 12–13) illustrates square and rounded ends from 1st–4th Dynasty Giza. Junker (Giza 1929 I, 129, pl. 16, 1–8) describes round-ended examples from tombs at Giza. Rounded end examples are also known from Abydos Cemetery S (**map 4**), belonging to 1st Dynasty (Peet 1914 II, 34, pl. 9.1). 88 examples were found in the 1st Dynasty tomb of Hemaka (Emery's types 11–13, Emery and Saad 1938, 18, 25f, pl.11) all with rounded ends averaging 68.84±4.38mm in length and 24.93+3.75mm in width (Tillmann 1992, 159–161). A group were carefully wrapped in a leather bag.

Metric analysis based on published material is as follows:

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Hemaka 1st Dynasty	88	68.84±4.38mm	24.93+3.75mm	----------	Emery and Saad 1938
Saqqara and Abydos	34 (of which 3 only were square)	62.26±8.76mm	23.26±4.97mm		Spencer 1980

Table 7. 'Razors', published groups

Those unpublished examples from British museums may be analysed as follows:

	Number in Group	Mean Length	Mean medial width	Mean medial thickness
All razors	43 complete	60.13±11.14mm	24.43±5.87mm	5.84±1.57mm
Round ended razors	15	62.77±4.88mm	27.1±4.95mm	5.54±1.28mm
Square ended razors	15	55.16±14.43mm	22.03±6.46mm	6.51±1.55mm
Table 8 : 'Razors' in British museums				

It is noticeable that those from the tomb of Hemaka are particularly long compared to others. It is possible that this includes certain types which I have classified as 'Intermediate bi-truncated'. There are some examples e.g., Emery's no 293 and 296 which have a length to width ratio greater than 3. No. 288 has a length to width ratio of 4.18. However, whether these examples also have a greater preponderance to notching or wear, as seems to be the case for other 'Intermediate bi-truncated' types, is unclear from Emery's report.

Dreyer (1986, pl. 45.362b) illustrates razors with round and square ends from the temple of Satet at Elephantine (**map 8**), though one example appears very narrow and the extent of invasive end retouch is unclear. I would have preferred to class this example as 'Intermediate bi-truncated'. It is difficult to know how many of this type were found from this report as Dreyer (1986, 136) groups these together with pointed blades under the general heading 'Flintklingen'. Dreyer (1986, 87) explains the dating of all the blades at Elephantine but all are in early levels.

Dating

Kromer (1978, 43) states that there are squared examples from the Naqada culture ('Nagada-Kultur'), that is the Predynastic era. The suggestion is repeated, citing Kromer, in Tillman (1992, 159). However this is perhaps a misunderstanding. The reference Kromer gives in his footnote is: 'W.M. Flinders Petrie, Naqada and Ballas, London 1896, Taf. LXXV/97, 98 und 99'. On checking this (Petrie and Quibell 1896, 51, pl. 75, 97.98.99), it appears that the example is actually from 4th Dynasty Ballas. Page 51 describes the implements on plate 75 and states: 'The square flakes, 97, 98, 99, are of the regular type of the IVth Dynasty, as found in tombs at Medum; they come from tombs of the same age at Ballas'.

The earliest examples, of which I am aware date to the 1st Dynasty. Reisner (Reisner and Mace 1908, 113) writes that the earliest examples are round-ended

examples found in the tomb of Menes. Menes may be either Narmer of Aha, that is, either the first or second king of the 1st Dynasty. However, by the time of the third king, Djer, such implements are definitely in existence, for example at 1st Dynasty Saqqara (**map 4; 5.2.4.3**; Macramallah 1940, fig. 19; Pitt Rivers 1901.40.11; 1901.40.11.14; 1901.40.15, etc.). These early examples have rounded ends.

There are square-shaped blades probably of the Predynastic Period which Renée Friedman has recently found at Hierakonpolis (**maps 2, 6 and 8**; pers. comm.). They are however, smaller than the Dynastic examples, measuring around 3cm by 1.5cm and are thinner. The lateral edges are retouched and the cross-section is not so trapezoidal. The ends are straight and they are made from imported flint. They are thus similar, though not identical to, the Dynastic pieces.

It is generally stated that there is a chronological development from types with convex ends to those with straight ends (Petrie 1902b, pls. 14, 15; Caton-Thompson and Gardner 1934, 128; Schmidt 1992, 84). Exactly when the type changed is not so clear. Petrie (1902b) illustrates the change as being in the 2nd Dynasty. Examples with square ends come from grave 10.p.1 and 10.p.2 at Turah (Junker 1912, 59-60 fig. 83, pl. 49), which date to the 1st Dynasty. There is also one published 1st Dynasty razor from Abydos tomb Z10 (**map 4**; BM EA68693 in Spencer 1980, 97, pl. 76 no.715) and three others from the Abydos temple (Petrie 1903b, 26, pl. 8.139-140). Straight-ended types also appear in the late Early Dynastic at Tell el-Faraʿin (Buto) (**map 4**; Schmidt 1989b, fig. 17, 12–13). However, round-ended types continue until at least the 4th Dynasty, though with less frequency than the square-ended types (e.g. Ashmolean 1891.583E, if this can be categorised as a razor, from Meidum). The illustration (Petrie and Quibell 1896, pl. 75, 97) shows a broad, square-ended blade. Also from 4th Dynasty Meidum (**maps 3 and 4**) BM EA687780/2 comes a straight-ended razor. Both round and square-ended pieces can appear in the same tomb, e.g. at Kom IV (Caton-Thompson and Gardner 1934, 128). The type, whether convex or straight edged, appears in graves down to the 6th Dynasty (for example at Tell Ibrahim Awad, **map 4**, Schmidt 1992, 85). Though, it is not clear if narrower examples than those I have included in this type here, are included in Schmidt's categorisation. From the 4th or 5th Dynasty mastabas at Giza (**map 4**; Reisner 1942 I, 511, fig. 314) round-ended examples appear, though unfortunately the sketch is small and may represent the 'intermediate bi-truncated' type.

The regularity and broadness of the blade is sometimes believed to be an indication of date. Caton-Thompson (Caton-Tompson and Gardner 1934, 128) states of

the Old Kingdom examples of the Fayum (**maps 1, 3, 4 and 5**): 'Our specimens vary considerably in width; many are very narrow; and the group compared with its protodynastic forerunners, denotes a decadence verging on extinction.' However, there are exceptions such as the Old Kingdom example again from the Fayum (Caton-Thompson and Gardner 1934, 128, pl. 134, no. 27) which is both regular and wide. Perhaps the 'fineness' of the blade depends not so much on date but on whether or not the item is found in a high status grave, as Spencer claims (Spencer 1980, 92). Alternatively, some poorly made 'razors' might be the 'intermediate bi-truncated' type, a different type to 'razors' proper.

The latest clearly dated examples, of which I am aware come from Tell Ibrahim Awad (**map 4**). Schmidt (1992, 85) dates one example from Tell Ibrahim Awad to the late Old Kingdom and one to the early Middle Kingdom. As these late examples are not individually illustrated it is possible that they fall into my 'intermediate' category, though they are late for this type. There are very occasional very late anomalies which resemble these razors, but some might be expected. For example, Giddy (1999, 237, pl. 51) illustrates item EES 1840 of the early mid-Eighteenth Dynasty, which is described as a 'chisel' though as far as can be seen from the illustration it does not have a flat end. It appears to resemble a straight-ended 'razors' measuring 6.9x2.2x0.9, though one end is more invasively retouched than the other. It has slight lateral retouch. Thus, while it is not quite so flat as good examples of razors it is remarkably similar. There is also a truncated blade bearing a striking resemblance to a 'razors' from New Kingdom Hermopolis (el-Ashmunein, **maps 3 and 5**) (Roeder 1931–32, 108, fig.4). Another example is in the museum at Mallawi (accession number 402–409, seen by the author in September 2007; **plate 19.1**). This example, according to the label and the catalogue (Messiha and Elhitta 1979, 19) is from Tuna el-Gebel, a Graeco-Roman site.

Schmidt (1992, 84) states 'There is no typological transition to any other class of blade tools.'

Use

Hikade (2005–2007) states that in some parts of the island of Elephantine (**map 8**) these 'razors' comprised up to 50% of all blade tools and that they were so widespread on this site that almost every household must have had such an implement. This of course suggests that they were not prestige tools. Like Spurrell (1891, 53), he (Hikade

2002, 313, fig. 4 a-c; 2005–2007, 80) is of the opinion that these artefacts functioned as multi-purpose tools.

Alternatively, they may have been manufactured with one purpose in mind and later reused. Indeed, one would imagine a razor would soon be dulled. Outside Egypt it is clear that blades could change from their original use. Taube (1991) states that Mayan prismatic blades initially served as lancets and razors but archaeological evidence shows that they served other functions once dulled. Evidence from inscriptions and also writings by the Spanish shows blades to be cheap and efficient and quickly discarded. One might imagine the same for Egypt.

It is my tentative view that while some examples were used as everyday items, they were not without symbolic importance. As stated above, these items are confined to Egypt which gives the possibility that they symbolize aspects of this region, however, quite what is more debatable.

These ‘razors’ seem to first appear in the graves of the 1st Dynasty with no apparent precedent. They are also predominant in wealthy graves. This might possibly associate them with the revolutionary changes at this date, the growth of the state, the rise of kingship, etc. The fact that they appear in wealthy graves may suggest they are instrumental in expressing ideas of status, at least for this period.

Schmidt (1992, 84–85) states that since they are usually found in graves, they are more likely to be a cosmetic tool than a craft item (as craft items are not so often found in graves of this period). 3 are found, for example, in an Early Dynastic grave at Tell Ibrahim Awad (**map 4**) near the skull together with 6 other blades (Van den Brink 1988, 78, fig. 11; Schmidt 1992, 84–85). A similar example was found at Saqqara (**map 4**; Emery 1954, 30–31, fig. 12), though Emery (1954, 28, fig. 9) shows an example near the pelvis of a burial at 1st Dynasty Saqqara. Midant-Reynes (1998, 44 footnote 66) also reiterates that these artefacts are primarily funerary. They are not present at ʿAyn-Asīl (**map 3**). The problem is that many more funerary than settlement sites have been excavated. Kromer (1978) cites examples from the settlement at Giza (**map 4**), though Schmidt (1992, 87 footnote 4), points out the actual status of this site is uncertain. As stated above in the temple of Satet and habitation areas of Elephantine (**map 8**) a few (four?) of which were ‘razors’. This is not a funerary site, though it does have sacred significance. Finally, Adams (1995, 143–144) publishes examples from the town of Hierakonpolis (**maps 2, 6 and 8; fig. 2**).

It seems that in some instances at least, these tools were manufactured especially for the grave. Refitting shows that the different blades cannot have been

apart for long after manufacture (otherwise the blades would have become spatially separate and unable to be refitted). Hikade (2005–7, 8) states that no cores have been found for this type of tool. However, BM EA68780/1–2 (**plate 16.2**) consists of 2 blades from the same core from 4th Dynasty Meidum (**maps 3 and 4**), of which one is a straight-ended razor. L56.20.108 and L56.20.109 (**plate 16.1**) are two blades from the same core from Meidum, now in Liverpool City Museum from the tomb of Rahotep, of which one could be classed as a razor (though possibly alternatively a narrow bladed type). 2nd Dynasty 'razors' blades from tomb of Khasekhemwy, Abydos (**map 4**), were on display in the British Museum in October 1999 (BM EA68771-4) these had been successfully refitted to show that they came from the same core. Additionally, the same institution displayed 6 blades from a 4th Dynasty core found at Meidum Tomb 17 (BM EA68777).

There is also at least one published instance of examples which can be refitted. Petrie (1892, 18, 34–35, pl. 29 nos. 20–21) discusses flints from the well of mastaba 8 at Meidum. These included flints divided up into groups tied up in cloths. They were found with 4 alabaster pots laid on a rush mat. Other flints were placed at the mouth of the chamber. When put together 17 pieces were found to have originally came from one block and in all there had been two or three blocks from which some 107 flints had been struck. The excavation report describes them and illustrates both convex and straight-ended 'razors' among the group from the same core. However, the round-ended ones are quite long and thin so perhaps fall into the 'intermediate' type.

The usually stated function of these tools is that they were razor blades. They are unlikely to be razors because: the carefully worked short ends have too much of an obtuse angle to be used for shaving. Even if they were razor blades the careful working must suggest a further non-kinetically functional purpose.

In the Old Kingdom the form perhaps provided a pattern for metal razors. In the tomb of Hetepheres at Giza (**map 4**) there are gold and copper 'razors' of similar design and prototype to implements in flint (Scharff 1931, 61, fig. 16; Reisner and Smith 1955 II, 19, 21, 45 and pls. 40a, c; 41f; Schoske *et al.* 1990, 116 no. 94; Kromer 1978, fig. 16.5). These metal types are however only 3mm thick at most (Reisner and Smith 1955 II, 45), the thinnest flint 'razor' is at least 5mm thick. Schoske (Schoske *et al*. 1990, 116, no. 93) also illustrates a 6th Dynasty type in copper and a 9th-10th Dynasty 'bronze' example is illustrated in Warmenbol (2002, 131). Hassan (1948, 39, 43) the type is found with other copper models and by the 5th Dynasty has degenerated into a flat slab of copper. We have assumed that both the square and round-ended types

were functionally identical. However, Reisner (Reisner and Mace 1908 III, 155) considered the square-ended type a razor, the convex type a knife. Presumably he considered those with square ends to be razors as they more closely resembled the metal form. Additionally, the fact that certain type of flints may look similar in shape to the metal *Hsbt*-razor does not necessarily mean that the flint form were used as razors. It is unlikely that the flint form mimics metal razors (the flint examples are earlier) but possible that metal forms mimic flint razors.

In the grave of Hetepheres metal types are found in the box containing bracelets, and other forms of metal 'razors' (Reisner and Smith 1955 II, 43-45), they are however completely physically separate from the flint 'razors' which are found in the south part of the tomb with pottery (Reisner and Smith 1955 II, 21), perhaps suggesting a different function for the metal and flint forms[5]. However, the metal forms it seems were not originally placed in this box but had been hastily gathered up and placed in there ready for removal to Giza (**map 4**; Reisner and Smith 1955 II, 19). Reisner (1929, 90) states that 7 metal 'razors' of conventional form were found with 7 metal rectangular 'razors'. This suggests they may have formed a set.

To complicate matters, the metal 'razors' may have been incorrectly defined. They could, for example, be more akin to strigils, though Reisner (Reisner and Smith 1955 II, 45) states that they had a sharp edge. One would imagine that gold or copper would be too soft to stay sharp enough to cut hair.

It would not be unusual if the Egyptians used such parallel-sided tools as razors. Certainly the use of flint for shaving is attested for other societies, even those with metal. Additionally, barbers' stone stools sent as a diplomatic gift from Egypt to Babylonia are mentioned in the Amarna letters (Miller 1987b, 144). However it could be that these stone barbers' tools are whetstones, not razors. Certainly parallel-sided blades would be better as razors as they would not cause nicking. However, why then retouch the ends?

Hester (1976, 350, fig. 4. a, b) illustrates 'razor blades' from Naga ed-Dêr (**map 6**). One specimen showed evidence of use on the truncated ends. Indeed, the attention paid to the invasive retouch of the ends for this type might suggest that these were the 'business ends', unlikely for razors.

In the following examples it is difficult to deduce if the author refers to razor blades proper or 'intermediate bi-truncated' (which I admit may be the same type

[5] Werschkun (2007, 254) suggests the razors were found together but Reisner's descriptions suggest that while they were found in the same grave they were not adjacent.

anyway): Caton-Thompson (Caton-Thompson and Gardner 1934, 128) states that many of those from the Fayum (**maps 1, 3, 4 and 5**) were 'too jagged and blunt to suggest razor blades'. Schmidt (1992, 85) states that several examples of razor blades from Tell Ibrahim Awad (**map 4**) showed secondary reuse with a heavily abraded basal edge. Hikade (2002, 311-313) notes lateral retouch on some examples from Elephantine (**map 8**). However, the following examples I have seen and classed as razor blades: A round-ended razor from tomb of Djer at Abydos (**map 4**), now in the Petrie Museum has fine retouch along the lateral edge (PR1901.40.10), as does M5388A from Abydos. This wear could either indicated primary or secondary use.

While this type could have been used as scrapers or even chisels, many are extremely fine, perhaps indicating a symbolic use. Those with wear appear exceptions. Most blades found in royal tombs, and most of those I have seen in British museums, appear to show little use. Moreover, it seems that at times certain tools such as pointed blades but also 'razor' blades were struck from the same core and placed in a particular tomb. This might suggest that at the items were made especially for the tomb. This does not mean however that the wider group, including less finely made examples, had symbolic importance only, or indeed that functional examples were not symbolic. So we can say that these tools may be made for the elite in the first instance, they are sometimes made primarily for the grave, they are unlikely to be a craft item (though could be based on craft items). Others show obvious signs of wear and are perhaps multifunctional.

7.4.5 Intermediate bi-truncated

Plate 19.

This group consists of blades which are between 'razor blades' and narrow blades and are truncated at both ends with invasive retouch. The sum of the length divided by breadth should be more than 3.1, though there are problems with borderline cases. With this group, however, it is sometimes unclear as to whether 'end retouch' is really that, or rather core preparation prior to blade removal. However, in most cases blades are clearly bitruncated. This group is more likely to exhibit gloss, wear, notching and other forms of lateral retouch. Their dating and close similarity with razor blades suggests they were considered the same type by the ancient Egyptians and indeed some Egyptologists classify them in the same group (see above, **7.4.4**). It is possible that they are less regularly made examples of 'razors'. There are categorised poorer examples elsewhere (e.g. Spencer 1980, 729 a and e; and 730 b). A particularly small

category within this type appear to be sickle blades. They are briefly mentioned here but discussed more in the separate section on sickle blades.

Unpublished examples

Plate 19.

I was only able to identify 11 of these from British museums (identified as 'intermediate' on the database in column C), all from the Early Dynastic to Old Kingdom, the latest being 5th Dynasty (Ashmolean 1971.53). Only three examples had lateral retouch- M1067, M3569 (**plate 19.1**) and Ashmolean 1971.53. The group tends to look more irregular compared to 'razors'. They may have rounded ends, e.g. Ashmolean 1891.583A from 4th Dynasty Meidum (**maps 3 and 4**) or square ends e.g. M3576.

Published examples

One or two of Spencer's double ended scrapers may fall into the category truncated blade rather than razor blade (e.g. Spencer 1980, 729 a and e; and 730 b) as they have at least semi-abrupt retouch. Several were found at Early Dynastic Helwan (**map 4**; Hikade 2005b, pl. 381-3).

Caton-Thompson (Caton-Thompson and Gardner 1934, 128, pl. 81, 32–37, 82. 4) categorises items I would call 'intermediate bitruncated' in a separate but related category to 'razors' blades (Caton-Thompson calls these 'rectangular flakes'). However, all her examples appear to have lateral notches. Her examples date to the Old Kingdom.

Reisner (Reisner and Smith 1955 II, 21, pl. 41e) illustrates a number of examples found in the 4th Dynasty tomb of Hetepheres along with square-ended 'razors'.

7.4.6 Anomalous bitruncated pieces (not razors, intermediate or sickles)

There are a few pieces which do not fall into the main bitruncated groups outlined here. They are not 'razors', they are not the intermediate type and they do not have gloss. These are regular, blades which are bitruncated and may or may not have serrated edges. Retouch at the proximal and distal ends is less invasive than for 'razors' or the intermediate bitruncated type. All but identical pieces have sickle gloss, and thus, one could argue that the whole group are sickle blades and that the non-glossy pieces are simply unused. Only 9 such pieces were found in British museums. Examples include BM EA67596 dating to the Middle Kingdom which looks like any

other Lahun (**maps 4 and 5**) sickle blade minus the gloss. UC7575iiand UC7575iv were much wider blades again serrated from Middle Kingdom Lahun and very much look sickles from the same site. Midant-Reynes (1998, 44, footnote 68) points out the similarity between 'razor blades and their cousins, sickle blades. He cites the unpublished manuscript of Katthagen on the temple at Elephantine (**map 8**) where a group intermediate between sickle blades and 'razor blades' was established. I have been unable to see this manuscript but it could be that this would show the anomalous pieces I describe.

7.4.7 Pointed Blades (blades with proximal pointed ends)

Plate 21.

Petrie (1902, 11, pl. 24) classified this group as long scrapers, Spencer (1980) classifies them as 'pointed flakes'. These regular prismatic blades have an overall teardrop shape, with a wider proximal end and narrower distal end. Proximal ends may be sharply pointed (e.g. Spencer 1980, pl. 75 685, 692, etc.) or more rounded (Spencer 1980, pl. 75 689), though for this typology ends must appear pointed through retouch rather than platform preparation. In some cases the distal end has also been slightly sharpened, and one or two have slightly chipped edges' e.g. 1901.14.9 from the Pitt Rivers Museum (**plate 21**). 1946.168.1a from Reading has the distal end pointed. Retouch tends to be dorsal. Distal retouch seems to increase with time and is perhaps a result of trimming to remove cortex. These blades measure between 3 to 10 cm long and usually no more than 2cm wide (see below for measurements taken from Spencer 1980, etc.). The platform appears punctiform and faceted and the proximal end exhibits a strong bend.

Pointed blades as defined by others sometimes include naturally pointed blades and at other times only those pointed by retouch. Spencer (1980, 96, pl.76 nos. BM EA68082 and BM EA68084), for example includes blades without retouch as 'pointed flakes' on the grounds that they may simply be unfinished versions of the retouched ones. Caton-Thompson and Gardner (1934, 127) also groups retouched and non-retouched types together. Certainly pointed blades were manufactured from the long narrow teardrop shaped blades discussed above. That this is so is evident in the retention of the overall morphology of the unretouched blades, which is retained in the retouched form. However, the retouched forms are confined to the Early Dynastic and perhaps to the Old Kingdom. They are rare in the Middle Kingdom. Unretouched blades, on the other hand are common in the Middle Kingdom. Additionally, the retouched pointed blades are generally narrower than the unretouched examples of the

same date (e.g. those in Spencer 1980). Thus, in this typology I class pointed blades as defined by retouch as a separate category. There is of course the problem in differentiating between platform preparation and retouch.

It is sometimes difficult to differentiate between blades with proximal platform preparation of overhang removal and blades where the proximal end has been retouched (for example, Ashmolean 1891.583E-F and Ashmolean E1896.1908 E689). The difficulty of deciding on whether blades are retouched or exhibit platform preparation is shown by Kromer (1978, 47, pl. 14) who classifies 11 lithic blades as pointed blades ('Spitzklingen') and writes 'Ein weiteres Kennzeichen deiser Form ist, daß fast immer Schmalseite gegenüber der Spitze (an der Oberseite des Bulbus) einige Retuschen vorgenommen wurden.' In my opinion, judging by Kromer's plate 14, only one example illustrated is retouched and the others as exhibit platform preparation. This is in accordance with the view expressed by Tillmann (1992, 154).

While Spencer includes unretouched blades in his group, he states (Spencer 1980, 91-92) 'the best examples are all cut to a sharp-edged point at the bulb end' and most of his illustrated examples do appear retouched. Spencer (1980, 92) hints that unsharpened types are unfinished sharpened blades, unfinished because they were made quickly for burial. However, it seems that even with the types made for burial, both retouched and unretouched types are manufactured from the same core e.g. the core M2242 from 3rd Dynasty Meidum (**maps 3 and 4**) has 13 retouched blades and one unretouched (M2242/11; **plate 9.1**). We cannot assume that the unretouched examples were destined to become pointed blades.

Examples

At least one example is known from the 1st Dynasty elite cemetery at Saqqara (**map 4**; **5.2.4.3**; Macramallah 1940, fig. 19), though a number of others from this site seem to be exhibit platform preparation rather than end retouch. Reisner (Reisner and Mace 1908, type-3, p112, pl. 40c) illustrates examples from Early Dynastic Naga ed-Dêr (**map 6**). He also states that examples were found at 12th Dynasty Lahun (**maps 4 and 5**) and cites Spurrell (1891 pl. 7, 6 and 12). However, it is difficult to tell from the Spurrell illustration if these really are pointed blades. Most of Spencer's (1980, 92, 94–96, pl. 75–76) Early Dynastic 'pointed flakes' from Saqqara, Abydos (**map 4**) and Tarkhan could also be placed in this class. One example appears in Kromer (1978, 47–49, pl.14.2) found at the Giza (**map 4**) settlement, and belonging to the 1st–4th Dynasty, the other 10 seem to be unretouched blades. Hassan (1953, 5, pl. 6) records 2

pointed blades from the burial chamber of a 4th Dynasty Giza mastaba. Examples are found in the royal tombs of Early Dynastic Abydos (Petrie 1902b, pl. 14). Emery's type-3 and 4 (1954, 67, fig. 96, pl. 84) seem to be pointed blades from tombs of the 1st Dynasty, from the main tombs and some subsidiary burials. His type-7 (Emery and Saad 1938 15, 85, pl. 125) from the burial chamber of a 1st Dynasty tomb also appears to be of this type. Hikade (2004, 66, pl. 3.11) discusses 'endscrapers with pointed blades' which he dates to the 1st Dynasty. He suggests this may have had a similar purpose to the earlier 'microendscraper'. Hikade's example, the microendscraper from Abydos U-133, appears to be about 3.5cm and the 'endscraper' from Abydos tomb B-16-2 is about 6cm in length and has fine retouch on the distal end.

Caton-Thompson and Gardner describe the following: class 3(a) 'Narrow long plain blades, with pointed tips' found in situ with pottery at Kom IV (Caton-Thompson and Gardner 1934, 127, pls. 81 1–9; 82, 2) and 90 examples at Site H Desert Fayum (**maps 1, 3, 4 and 5**) which they date to the Fourth Dynasty (Caton-Thompson and Gardner 1934, 127–128, pl. 81, 1-9). Caton-Thompson (1927) states 'they occur on practically every protohistoric site'. Thinner, distal, end notched types also occur at Kom IV, which they classify as type-3b. Notched examples are also found in Predynastic Maadi (**map 4**), though here the proximal end is notched (Rizkana and Seeher 1985, 239).

The Temple of Satet at Elephantine (**map 8**) includes type-362a (Dreyer 1986, 87, 136, pl. 45) which appears to be a pointed blade. This is of an uncertain date though in light of the other material an early Old Kingdom date seems likely.

Examples from British museums include:
H2126.1 from 1st Dynasty Abydos may be of this type though this is an example where it is difficult to differentiate platform preparation from retouch. PR1901.40.7-9 is a pointed blade from the tomb of Djer, 1st Dynasty Abydos. The following also appear to be pointed blades: M2252 from 3rd Dynasty Meidum (**maps 3 and 4**); Ashmolean 1891.583A-H from 4th Dynasty Meidum; Ashmolean 1927.3004 and 1927. 3005 from the same core from 4th Dynasty Meidum; BM 66778/1-3 from the same core at 4th Dynasty Meidum; 4th Dynasty Meidum BM 66779/1-2 (same core). Middle Kingdom and later blades are described below.

I here give measurements of pointed blades from published sources and material held in British museums which originally came from Arsinoe, Abydos,

Fayum (**maps 1, 3, 4 and 5**), Lahun (**maps 4 and 5**) and Naqada (**map 6**) and date from the Early Dynastic to Middle Kingdom.

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Abydos 1st Dynasty	18	68.72±16.40mm	14.89±4.33mm	----------	Spencer 1980
Saqqara 1st Dynasty	12	71.8±15.69mm	15.6±3.2mm	----------	Spencer 1980
various	11	72.71±19.05mm	15.25±3.21mm	4.8±2.79mm	British museums
Table 9 : Pointed blade measurements					

Dating

The type appears to begin in the Predynastic (Caton-Thompson and Gardner 1934, pl. 53 1-20). Similar examples, which have been heat treated, are found at Badari and are categorised by Holmes (Holmes 1989, 154, table 5.37 and fig.5.18) as 'glossy bladelet tools.' They are also present at Maadi (**map 4**; Rizkana and Seeher 1985, 239, fig. 3, 5; Rizkana and Seeher 1988, 19-29, pl. 24). A number of these are small in size and may be classed as bladelets

The vast majority of pointed blades seem to date to the Early Dynastic (see above for examples) but some belong to the Old Kingdom. Spencer (1980, 91-92) states that the retouched type continue until the Sixth Dynasty. At ʿAyn-Asīl (**map 3**) examples date to the late Old Kingdom to First Intermediate Period (Midant-Reynes 1998, pl. 11. 4; pl .14). The example on Plate 11.4 is retouched at the distal end. Spencer (1980, footnote 7) lists G4620 (Reisner 1942, I 509 fig. 312 and pl. 69f;) as including 6th Dynasty pointed blades. It is difficult to tell from Reisner's illustrations and photographs if this is the case and besides, Reisner (1942, I, 454-5 dates mastaba G4620 as IV-V Dynasty. I am uncertain as to why it should be considered 6th Dynasty by Spencer. Very occasional examples (e.g. PR1889.27.18 and those described below from Lahun) date to the Middle Kingdom, or as described below, some examples may be New Kingdom.

Use

These blades show little sign of wear and their fine nature suggests that they were used for delicate work. Spencer (1980, 91) believes that pointed "flakes" were evidently intended to be used for fine cutting, scraping or boring, as 'the best examples are all cut to a sharp-edged point at the bulb end.' While, as stated above, it is possible that

pointed retouch simply represents cortex removal, M2242 has its distal end de-cortexed, this is unlikely to be cosmetic as lateral cortex remains.

Spencer (1980, 92) further suggests a funerary use. Certainly, most of the examples of which I am aware come from burial sites, and refitting suggests that they were made in these cases for the grave. However, the paucity of excavated Early Dynastic settlement sites may skew the evidence. This brings us to the question of the pieces found in graves struck from the same core. Such examples occur in 1st Dynasty Saqqara (**map 4**; BM68074 and 68102 Spencer 1980, 91, 96 705b, pl.75). These are discussed in **this thesis, volume 1, 5.2.4.6**.

It is possible that pointed blades were used for fine chiselling (see below, **7.4.10**).

Middle Kingdom and later possible pointed blades

These later examples differ from earlier types in that retouch or preparation less fine and the point not always so pronounced (though see BM EA67621 which has a pronounced point). Later examples are not sharpened at the distal end. These include Pitt Rivers 1889.27.18 from Lahun (**maps 4 and 5**; **plate 21**); BM EA67621 (**Appendix 2**) appears to be an example from Lahun, dating to the Middle Kingdom. This item, now in the British Museum has traces of mastic along the distal end, perhaps indicating hafting.

BM EA55153 from Amarna (**maps 3 and 5**) is possibly a rougher version of a pointed blade (108mm long; **plate 10.2**). There are two possible 18th Dynasty pointed blades from Memphis. EES 1937 appears to be an example of a pointed blade with retouched proximal end (Giddy 1999, 238, pl. 52), though in the publication it is classed as an awl. The illustration however, does not indicate the bulb of percussion, making identification difficult. Perhaps more convincing from Memphis is the apparently unretouched blade EES 3109 (Giddy 1999, 242, pl. 90). Though it is listed in the catalogue as a retouched blade, the photograph appears to show an unretouched blade. With both Memphis examples however, I must reserve judgement having not seen them in 'the flesh' but only through illustrations.

7.4.8 Long narrow notched blades

Plate 22.

These are basically long narrow regular blades with a notch at the distal end. These appear rare. Only 17 were found at Kom IV (Caton-Thompson and Gardner 1934, 128,

pl. 82) for the Old Kingdom Fayum (**maps 1, 3, 4 and 5**). Caton-Thompson and Gardner (1934, 128) considered such tools to have been used for delicate cutting work.

7.4.9 Sickle blades

Plates 22-25.

Flint is the most common cutting edge for sickles of the Dynastic Period, though sickle blades in blue and red glass have been found in a ceremonial sickle, from the tomb of Tutankhamun (Murray and Nuttall 1963, 17 no. 561). The flint sickle blade is known before the Dynastic Periods and continues into the Graeco-Roman period and the introduction of iron. As Rosen (1997, 163) has stated, until the introduction of iron, there was no real competition with the stone blade for harvesting. Flint sickles are better than copper ones and equal to those of bronze (Steensberg 1943, 11-26 and Coles 1973, 34-39). However, by the Graeco-Roman Period iron seems to have been commonly used for sickles as attested by actual examples (Scheel 1989, 56) and textual evidence from the Ptolemaic Period that the Min harvest ritual as inscribed on the Ramesseum and at Medinet Habu was to be carried out using a black sickle of *biȝ* (Gauthier 1931, 61, 94, 227). [*Biȝ* may be translated as meteoric iron.]

In this typology only flint blades are discussed. Around 3-6cm long and 1-2cm wide, blades may take a variety of forms and may only be identified with any certainty by either hafting or through formation of sickle gloss. The only unretouched sickle blade of which I am aware from British museums is BM EA74744. Cross-sections are variable but usually trapezoidal, more rarely triangular. Those with an overall (dorsal/ventral views) rectangular shape are placed side by side in the haft while the triangular shaped pieces are end-blades. Usually sickle blades are sections of blades, rather than complete blades and almost invariably exhibit lateral retouch, often in the form of nibbling or denticulation. While they may be segmented they are more likely to exhibit truncation of one or both ends. They may also be backed. As has been pointed out by Rosen (1997, 144), it is not clear whether there is/are a distinctively Egyptian type of blade/s as opposed to a general north African one.

Early Bronze Age I (Late 4th millennium BC) Egyptian sickle segments have been found outside Egypt in the Levant at Erani (Rosen 1988a) and other sites (Gophna and Friedman 1993). Absence of cores suggests that production was not carried out on site but other Egyptian material suggests Egyptian presence at these sites.

As the name suggests, sickle ‘blades’ were usually made on blades, sometimes snapped and sometimes truncated by knapping. Occasionally however, so-called sickle

‘blades’ are actually ‘flakes’. It is often difficult to deduce the shape of the original unretouched artefact and the direction of blow. The presence of a dorsal arris parallel to the unretouched margin may suggest that the blade/flake was originally elongated, i.e. a ‘blade’, but is not proof. For certain periods we can see that blades were produced as a stage in sickle ‘blade’ manufacture, as we have a number of unfinished specimens. However, in other periods, it is clear that at least some tools exhibiting a final elongated morphology were originally flakes, as for example sickle ‘blades’ from Amarna (**maps 3 and 5**; see below).

Occasionally, hafted examples are found. A number of examples present in the Cairo Museum are from Old Kingdom Saqqara (**map 4**; Hester 1976, 350). Hafted examples found at Lahun (**maps 4 and 5**) belonging to the 12 and 17th Dynasties (Petrie 1890; 1891). An example of a hafted sickle of the 18th or 19th Dynasty was also found at Deir el-Medina (**map 7**; Bruyère 1935). Where actual hafts are not in existence, hafting can be determined from the pattern of gloss relative to the working edge and from the presence of mastic (Cauvin 1973). Hafting, because it would have involved melting the cement, may have been done in a place away from the use-site (Keeley 1982). Thus, the large numbers of blades found at Amarna (Spurrell 1894) may not necessarily represent manufacturing areas of the blades *per se*, but rather hafting areas.

Spurrell (1894, 37-38) stated that bees-wax was used as the cement, as it softens on heating and hardens on cooling. The fumes, of examples he burnt smelled of wax. However, it is possible that different mastics were used at different times and places. It seems likely that plant resin may also have been used. Keeley (1982, 800) points out that many vegetable pitches and gums have a tendency to crack with dehydration and this can be counteracted by tempering with fibrous materials grit, etc. Jensen (1993, 127), points out that a mixture of sand quartz and vegetable fibres enhances the adhesive qualities. A visual examination of the mastic on blades in British museums suggested a sand temper. Endlicher and Tillmann (1997) showed that lime plaster was used for hafting at 18th Dynasty Tell el-Dabʿa.

The term ‘sickle blade’ is, in this typology, used for blades in British museums exhibiting either mastic as though from placement in a sickle haft; having the triangular shape of an end sickle; or exhibiting sickle gloss, though it is recognised that i) sickle gloss can occur on tools used for plant material such as wood ii) lack of gloss does not necessarily mean that the artefact was not used for reaping long stemmed plants. Unfortunately, published excavation reports do not always state if blades

exhibit sickle gloss. The definition as 'sickle blades' in publications is assumed in this thesis to be correct. Morphologically similar types without gloss are only discussed in this section if they are particularly relevant to the argument.

This group of flint tool is usually considered a reaping instrument because: complete examples of sickles have been found with flints like these set into them; the complete tools show a general morphology appropriate to reaping and identical looking tools are shown represented on Egyptian tomb walls[6]; a number of the flints show sickle gloss which is consistent with cutting silica-rich cereals; geographical distribution of sickle blades generally corresponds with agricultural areas. However, while some sickle blades were certainly used for grain harvest, others may have had a different purpose.

Rosen (1996, 149) states that Levantine sickle blades were largely a domestic industry. However, in Egypt there is often an association with the state. For example, at Amarna (**maps 3 and 5**), large numbers occur on the temple waste heaps (Spurrell 1894). By contrast, no sickle blades were found in the Workmen's Village at Amarna (Miller 1987b, 144).

Sickle gloss

In 1892, a paper by F. Spurrell for the first time used evidence from experimental archaeology focusing specifically on use wear of sickle blades. His approach was inspired by Petrie's 1890 discovery of almost completely preserved Egyptian implements from Lahun (**maps 4 and 5**). Spurrell's work, using flint on various types of material, led him to conclude that the bright polish on flints probably resulted from cutting cereal stems. Sickle gloss has been widely recognised from the 1930s (Curwen 1930). It is now generally agreed that reaping of grasses results in sickle gloss. However, lustrous edges also results from woodworking and even hoeing or digging. In some cases it may be possible to distinguish the different types of gloss either macro- or microscopically.

Meeks *et al.* (1982) list three basic theories of gloss formation: 1. it forms from abrasion between tool edge and soil particles and/or opal phytoliths from plant material. 2 it is an additive surface accumulation of siliceous plant material, and 3. it is the result of interaction between flake surface, water and phytoliths. Meeks argues for

[6] The 18th Dynasty tomb of Paheri at el-Kab (EK3), for example, shows a sickle with individual teeth clearly marked (seen by the author April 2008).

theory 1. Unger-Hamilton (1984) however, argues for a combination of abrasion and deposition. .

Egyptian flint is reluctant to achieve gloss (Holmes 1987), thus we may assume that blades with gloss will have been subject to prolonged use. Spurrell (1894, 37) notes blades from Amarna (**maps 3 and 5**), where it was clear from the cement that they had been set, despite showing no gloss. Jensen (1993) shows that cutting of reed leads to a more rapid build up of polish than cutting of cereals. Woodworking takes the longest time to build a polish. It seems very probable that in Egypt, flint was used for the cutting of papyrus or reeds. Sickle blades, some of which have gloss, occur in large quantities on the east bank at Amarna (**maps 3 and 5**) and yet the cereal growing land was on the west. Either these sickle blades were on the east bank for rehafting or they were used on the east bank for purposes other than reaping cereal.

Lustre along both parallel edges must suggest that blades were reinserted into hafts to prolong the life of the blades. This occurs on Old Kingdom blades such at ʿAyn-Asīl (**map 3**; Petrie 1917, 46; Hester 1976, 350; Midant-Reynes 1983, fig.1. C).

A number of blades in British museums without gloss are otherwise identical to blades with gloss. In this typology, the former were simply classed as 'blades, retouched', the latter as 'sickle blades'. However, it is possible that the blades without gloss were used for the same purpose as those with, and were perhaps not used or only lightly used. This, however, must remain an assumption.

Uses other than grain harvest

As stated above, it seems possible that a number of Egyptian sickle blades were used for harvesting papyrus or other reeds. Some may also have been simple knives or saws, others may have been purely ceremonial. Sometimes micro-wear analysis can clarify use (see below).

However, we cannot deny that at least some sickles were used in grain harvest. The association of the sickle with grain harvest is particularly evident in depictions in tomb walls. Some of the earliest occur in the Old Kingdom. For example, at Meidum (**maps 3 and 4**) a 3rd Dynasty depiction of a sickle set with triangular teeth (Petrie 1892, pl. 13). Harvesting with sickles of apparently flint blades also occurs on New Kingdom tomb walls, for example in the tomb of Sennedjem.

Denticulation

The denticulation of a number of sickle blades has often led to their identification as ‘saw blades’. For example, Petrie describes several Amarna flints as saw blades but an examination of the specimens in British museums shows them to be sickles. Denticulation allows blades to last longer suggested by Spurrell (1891, 54).

Tillmann (1999, 265) suggests that heavy denticulation was introduced from Palestine during the Second Intermediate Period and distinguishes this from denticulation simply due to sharpening retouch. In this typology, it was not always apparent which blades were serrated and which denticulated or toothed because the distinction is largely a matter of degree, thus to some extent subjective. As Spurrell (1891, 54) states ‘some are found which can scarcely said to be jagged….Some of the serrations are close without an interval, others with long intervals as much as quarter of an inch.’ As denticulation and retouch is a continuum it is difficult to assess Tillmann’s observation.

Denticulated sickle blades, sometimes backed and truncated also appear as early as the Late Predynastic settlement type of Maadi (**map 4**; Rizkana and Seeher 1985, 249). Denticulated sickle stones are also found in the Predynastic graves of Hammamiya (Baumgartel 1960, 25). Schmidt (1989a, fig. 40) identifies denticulated blades on a late Predynastic site Delta site. An Early Dynastic denticulated blade is also known from Tell el-Faraʿin (Buto) (**map 4**; Schmidt 1989b, fig. 14.2; **plate 23**). The early settlement at Abydos (**map 4**; Petrie 1902, 12, pl. 26) produced a number of what could only be thought of as ‘heavily denticulated’ pieces. At ʿAyn-Asīl (**map 3**), a late Old Kingdom to First Intermediate Period site, a number of sickle blades appear heavily denticulated, (e.g. Midant-Reynes 1998, no 582, pl. 13.2). Denticulated blades were found at Tell Ibrahim Awad (**map 4**) but mostly from undated contexts (Schmidt 1992, 83–84, fig. 4.23–28). Schmidt (1992, 84) assumed them to be Middle Kingdom and stated that the few ones in earlier contexts may have been intrusions.

From British museums Ashmolean 1892.980 is a denticulated blade without gloss from a 6th Dynasty tomb at Kasr Syadel-Qaar, though one could argue that the denticulation is light. A sickle blade from tomb of Hen-Nakht, Bet Khallaf (**map 6**) exhibited gloss and small, regular, denticulation (Ashmolean 1896-1908 E889, published in Garstang, Mahasna and Beth Khallaf p11–14 pls. 17, 18). Middle Kingdom examples from Harageh (**map 4**; Ashmolean 1914-772 and 1914-774 published in Engelbach and Gunn 1923, 17 and also Petrie e.g. UC6458) are heavily denticulated. Many sickle blades from Lahun (**maps 4 and 5**) are also serrated. The

apparent increase in heavy denticulation is perhaps a factor of their simply being more blades so that there is a statistically greater likelihood of more being heavily denticulated. A number of long thin sickle blades in Middle Kingdom e.g. UC7527iii 1, 3 etc. (average 70mm x12mm; **plate 25**) and Harageh examples are denticulated.

Thus, denticulation does not seem to relate exclusively to later periods. Additionally, it is clear that later sickle blades were often not denticulated (see below).

Early Dynastic

Plate 23.

Predynastic sickle blades include both bifacial and non-bifacial forms (Rizkana and Seeher 1988, 33–35, pls. 73–76). The bifacial form continues no later than the Early Dynastic, while the unifacial type certainly continues through the dynastic periods.

Certain examples of Kromer's 'saws' (Kromer 1978, 39, 40, pl. 11. 10–15) from Giza (**map 4**) look very similar to sickle blades thus are included here. However, he does not mention presence of gloss, therefore their actual use is debatable. Some of these are bifacial (Kromer 1978, 39) and are present until the end of the 2nd Dynasty.

Kromer (1978, 40–42, pl. 11. 1–9) also discusses a non-bifacial type which continues through to the 4th Dynasty. These are no more than 1.5 cm wide. Usually there is no lateral retouch, and the illustrations suggest the blades are snapped. Again, there is no mention of gloss, though the type is morphologically similar to other blades from other sites exhibiting sickle gloss.

Early Dynastic sickle blades tend to be trapezoidal or triangular in cross-section; both ends are truncated by retouch rather than simply snapped (though see below, the Giza (**map 4**) examples appear snapped); some may be steeply retouched on their backs (Schmidt 1989b, fig. 14.1 and 2, and **plate 23**; see also M4689). Retouch, where apparent, is dorsal and some cutting edges may be denticulated (e.g. Schmidt 1989b, fig. 14.2). The type generally seems to continue into the Old Kingdom, though Schmidt (1992, 82) notes a reduction in the width of blades from the Early Dynastic to the Old Kingdom. Hikade (1999, 52) suggests a general length/width ratio of 4:1.

1st Dynasty examples also come from the tomb of Hemaka (Emery and Saad 1938, 33, pl.15) and from Abu Roash (**maps 1 and 4**; Midant-Reynes 1983, 261). Emery (1954, 67; 1958, 51, 85, pl.125) records 'sickle blades' of 3.8-5.2 cm long from magazines, and, more occasionally, from the burial chambers of 1st Dynasty Saqqara tombs (**map 4**). 1st and 2nd Dynasty examples are published from Tell el-Faraʿin

(Buto) (**map 4**; Schmidt 1989b figs. 14 and 15); from Abusir (**map 4**; Bonnet 1928, pl. 33, no 18); and Abydos (**map 4**; Petrie 1902, pl. 26 nos. 295, 298, 300, 302, 303, 304). Early Dynastic to Old Kingdom examples are known from Tell Ibrahim Awad (**map 4**; Schmidt 1992). At least one denticulated sickle blade is known from 2nd Dynasty Naga ed-Dêr (**map 6**; Reisner 1908, 113, pl. 40c).

At least 53 Early Dynastic sickle blades from Abydos are present in British museums. Denticulation, which is present in most cases, is both ventral and dorsal and truncation is usually both proximal and distal. Occasionally one lateral edge is backed while the other is retouched, e.g. M38117. Occasionally one end is snapped rather than truncated, though this may represent a broken blade. Measurements are as follows:

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Abydos	53	43.24±10.81mm	12.31±1.99mm	3.82±0.85mm	British museums
Table 10 : Sickle blades from Abydos in British museums					

Old Kingdom

Plate 23.

Sickle blades of this period and later are all unifacial and there is a general trend toward larger blades. Schmidt (1992, 82) states that ventral truncation does not exist before the middle Old Kingdom (a feature which continues until the New Kingdom e.g. Tillmann 1986, fig. 2.3). Some pieces are bitruncated but others may be truncated at one end and snapped at the other e.g. Ashmolean 1896-1908 E889 from 3rd Dynasty Bet Khallaf (**map 6**).

There were only six sickle blades from British museums measured for the Old Kingdom, thus most of the information on such blades from this period comes from published sources.

Sickle blades from Old Kingdom Elephantine (**map 8**) range between 30 and 80mm long, up to 20mm wide and 2 to 8mm thick (Tillmann 1992, 158). Midant-Reynes (1998) describes sickle blades (categorised by types with a high percentage exhibiting gloss) from late Old Kingdom to the First Intermediate Period ʿAyn-Asīl, Dakhla Oasis (**map 3**; **plate 22**). 130 sickle blades were made on tabular flint (Midant-Reynes 1998, 29–32, 39, photo. 8, pl. 25, pl. 26). Denticulation is rare on this type and examples are retouched on all sides. The sizes are given in the table below. This type appears particularly wide compared with others of the same period. These are very

similar to the ‘triangular knives’ and ‘rectangles’ described from Old Kingdom ʿAyn el-Gazzareen (**map 3**, Kobbusewicz 2003, fig. 5. 5, 6) also from the Dakhla Oasis, though the presence of sickle gloss on the latter is unconfirmed in the published report. As both ʿAyn-Asīl and ʿAyn el-Gazzareen are in the Dakhla Oasis, it is possible that the use of tabular flint is characteristic of this area.

Midant-Reynes (1998, 24, pl.12, pl. 13) also reports some 75 regular denticulated blades made on brown/black flint, of which most exhibit sickle gloss. Another 20 were made of pink flint, again most had sickle gloss. Both the black-brown and the pink examples, appear from illustrations, to have been snapped rather than truncated. Measurements are given below.

From an earlier report of the same site, Midant-Reynes (1983, 46) states that 24 of the 38 blades from ʿAyn-Asīl were denticulated. The non-denticulated examples also showed use-wear (Midant-Reynes 1983, 258) thus cannot be classified as unfinished examples of the denticulated type. At this site sizes range between 26x12x3mm to 49x15x9mm. Ends are truncated at either one or both ends. Truncation is dorsal.

Hikade (1999, 52–53) states that a number of bitruncated pieces in Egypt were used as sickle blades. Sometimes the working edge is serrated and the length to width ratio is 4:1.

First Intermediate sickle blades from el-Ashmunein graves (**maps 3 and 5**; Spencer 1993, 61, pl. 96.318–337) 318 appear to be denticulated. I calculate the values as below. The sizes appear large for the period (see **table 11**).

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Buto OK	16	45.3±9.87mm	13.28±1.44mm	4.14±1.13mm	Tillmann 1992, 158 (1)
'Ayn-Asīl Late OK-1st IP	tabular 87-straight -------- 43-end sickles	48mm-straight ---------- 61mm-end sickles	24mm-straight ---------- 25mm-end sickles	5mm-straight ---------- 6mm-end sickles	Midant-Reynes 1998 (2)
'Ayn-Asīl Late OK-1st IP	75 on brown-black flint	47mm	12mm	4mm	Midant-Reynes 1998 (2)
'Ayn-Asīl Late OK-1st IP	20 made on pink flint	39mm	13mm	3mm	Midant-Reynes 1998 (2)
el-Ashmunein 1IP	21	54.71±16.85mm	17.19±7.25mm	----------	Spencer 1993

Table 11 : Old Kingdom-1st Intermediate Period sickle blades

1. Tillmann's calculations, not my own

2. Midant-Reynes calculations, not my own

Comparison of sizes by site suggests that while there is a general trend toward larger examples, sizes are also dependent upon material and site. The larger size of the material from tabular flint may represent local manufacture by non-specialists. Tabular flint may well come from a local sources, while the pink and black-brown flint would have been imported (Midant-Reynes 1998, 4–5). Tabular flint would be easier to manufacture into sickle blades rather than manufacture of long thin blades from imported flint as performs for sickles. Midant-Reynes (1998, 41) suggests the possibility that tabular flint and non-tabular flint sickles were used for different uses, though wear analysis would be necessary to test this hypothesis.

Midnant-Reynes believes the long regular sickle blades (not those made on tabular flint) from ʿAyn-Asīl, like the pointed blades, are manufactured through pressure flaking (Midnant-Reynes 1983, 258). He also states (1983, 262) that ʿAyn-Asīl represents the final examples of the early type of regular blade. Kobuseiwicz (2003, 13) also states that his blades were produced by pressure flaking.

Pawlik (2005, 198–199) describes Old Kingdom – Early Middle Kingdom sickle blades from Kom el-Ahmar (**maps 2, 6 and 8**) which are similar to those from Buto (**map 4**; Tillmann 1992, 158), but, in contrast to Buto, only a few sickle blades have end retouch. These blades segmented, they have a median width of 13mm and thickness was between 3 and 4mm. Some are denticulated.

Middle Kingdom

Plate 25.

Generally it appears that Middle Kingdom blades are more likely to be snapped at one or both ends rather than truncated at both ends. Blades are also shorter and wider than earlier examples and denticulation and backing is common.

Spurrell (1891, 53–55, pl.7.5–6) describes 12th Dynasty sickle blades from Lahun (**maps 4 and 5**) as averaging 1½ inches long (c. 3.75cm). These are nibbled or denticulated.

Schmidt (1992, 83) describes examples from Tell Ibrahim Awad (**map 4**). Though in undated contexts, he identifies them as Middle Kingdom on the grounds of typological similarity with others from dated contexts. The similarity includes truncation at basal edge only which terminal edge is left plain. One lateral edge is usually widely denticulated and the group is wider than earlier examples.
Tillmann (1992, 123–126, pl. 40–65) discusses Middle Kingdom and Second Intermediate sickle blades from Tell el-Dabʿa. The plates show these as mainly his types C and D (see also Tillmann 2004 and below for an explanation of Tillman's C and D types), though the text here describes types 22–24. Fig. 88 analyses 19 blades of type-23 (D) which have a mean length of 40.73±12.96mm, width of 18±3.85mm and thickness of 4.64±1.15mm.

A sickle blade of late Middle Kingdom – Saite Period is illustrated from East Karnak (**map 7**; Miller 1985, 232, fig.1) which shows sickle gloss, measures 39x20x5mm and is truncated top and bottom. Miller states others were found.

Of those from British museums, 38 sickle blades were from the Middle Kingdom. Their mean measurements are given below. This confirms the general trend for blades to get wider and thicker. Most were serrated. Some e.g. UC6458Vii, were backed opposite the retouched lateral edge. Some were broken at both ends rather than truncated, e.g. UC7578, UC7575vii, Ashmolean 1888.267/1 others were truncated at both ends, e.g. UC7575vi.

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Tell el-Dab'a MK	19	40.73±12.96mm	18±3.85mm	4.64±1.15mm	Tillmann 1992 (1)
Various MK	38	57.10±13.48mm	14.31±3.49mm	4.06±1.41mm	British museums

Table 12 : Middle Kingdom sickle blades

1. Tillmann's 1992 calculations

Second Intermediate Period Onward

Plates 24 and 26

Tillmann (1992, 2004) discusses sickle blades from the Middle Kingdom through to the New Kingdom using examples from Tell el-Dabʿa and Qantir (**maps 3 and 4**) and explores the trend for Middle Kingdom to 2nd Intermediate Period blades to become shorter and wider (Tillmann 2004, 365), followed by a radical break in sickle types in early 18th Dynasty. These New Kingdom types are much larger than their predecessors. Tillmann divides the sickle blades into types C and D for the pre-New Kingdom periods. Type C is a triangular form, whereas type D is rectangular and parallel edged. Retouch may be ventral or dorsal. Tillmann's types A and B belong largely to the 18th and 19th Dynasties (discussed below).

New Kingdom and Later

Plates 24 and 26.

Sickle blades make up the most commonly occurring lithic type of the New Kingdom and later. As stated above, the New Kingdom examples appear larger and more robust than earlier types, and are shorter and wider (a factor they have in common with late Bronze Age sickle blades from Jericho; Payne 1983, 727). They may be backed and denticulated. A number appear to have been made on flakes rather than blades. Cortex is frequently present, especially on end sickles.

Tillmann (1992, 94-99, pl. 26-38) discusses type A and B sickle blades of the 18th and 19th Dynasties from Qantir (**maps 3 and 4**). His calculations of their mean measurements are given below. Both type A and B tend to be retouched on all sides and type A tends toward heavy denticulation. Tillmann's illustrations show cortex on several end sickles. He also clearly shows the ripple marks, which are usually placed as to suggest blades rather than flakes (**plate 24**). However, on a number of New Kingdom 'blades' which I have examined from Amarna (**maps 3 and 5**) now in British museums, I was unable to detect the direction of the ripples though in some cases it appeared rather that the artefact was made on a flake rather than a blade.

Spurrell (1894, 37) describes parts of pebbles which had been naturally split 'by action of the weather' which had been gathered together for use at the south end of Amarna and states a similar use of such material of the same date at Gurob (**maps 3, 4 and 5**). Some of these pieces appeared to Spurrell to have been used to manufacture sickle blades. Examination of examples from British museums supports this. Liverpool

Museum 56.20.764-5 from Amarna which, although split, shows no signs of conchoidal fracture (this piece was also manufactured from tabular flint). Pitt Rivers 1922.30.2, a sickle blade from Amarna, also has no apparent signs of conchoidal fracture but the surface appears rather to suggest a naturally broken piece.

While New Kingdom blades are more frequently denticulated than not, it is also clear that at Amarna non-denticulated blades were also set (Spurrell 1894, 37). At Qantir (**maps 3 and 4**), a completely unretouched blade was also identified by Tillmann (1992, pl. 37.6) as a sickle blade. Others such as Tillmann's type B, discussed above, may be retouched but hardly denticulated.

A number of denticulated flakes were found at Lahun (maps 4 and 5). Spurrell believed these to be 12th Dynasty, but Petrie believed one example to be 18th Dynasty (Petrie and Spurrell 1891, 12, 54, 55).

There are many sickle flints from the Ramesside village of Lisht (**maps 4 and 5**) now in the Metropolitan Museum. All have serrated cutting edges and many are slightly curved to coincide with the arc of the sickle (Hayes 1959, 408–409). 4 flint sickle blades with serrated edges from the silo area at el-Balamun (**map 4**) belong to the Third Intermediate Period (Spencer 1999, 77). 18th-19th Dynasty sickle blades were found in the workmen's village of Deir el-Medina (**map 7**) by Bruyère (1939, pl. 42) most of which are denticulated.

Giddy (1999, pl. 51) lists sickle blades and other tools found at Memphis. Among them are 29 New Kingdom and later sickles. Some are denticulated, retouch appears on all four sides and cortex can be present. From the published sizes the following may be calculated according to period: There are 15 Third Intermediate Period and Ramesside blades with mean length of 47.83$\pm$16.95mm, mean width of 18.73$\pm$8.62mm, and a mean thickness of 6.06$\pm$6.47mm. The 18th Dynasty blades have a mean length of 47.25$\pm$16.92mm, mean width of 20.96$\pm$6.38mm, and a mean thickness of 4.86$\pm$1.4mm. Thus, there is little difference between the 18th Dynasty and later groups.

Sickle blades have also been found in hafts. A curved wooden sickle with 16 inch blade grooved to receive a row of small serrated flint teeth and dating to 18th Dynasty is in the Metropolitan Museum (Hayes 1959, 215). It is clear that at least some of these examples had a ritual purpose. Some, e.g. the 18th Dynasty inscribed sickle British Museum EA 52861 (Strudwick 2001, 29, pl. 8), have gold inlaid hafts.

An examination of New Kingdom sickle blades from British museums included 21 sickle blades, mainly from Amarna (**maps 3 and 5**). Their mean length was

60.97±19.52mm, mean width was 26.43±7.44mm and mean thickness 7.39±3.13mm. This makes them a little larger than published examples. Some were backed, a number had cortex, most were denticulated and truncate, though occasionally snapped. Retouch tended to be dorsal, though BM EA55155 had ventral retouch.

It is clear that sickle blades continue in Egypt until the Roman Period, the 20th Dynasty (Debono 1982, 381; cited in Jacquet 1972, 210). Third Intermediate Period sickle blades are apparent from el-Ashmunein (**maps 3 and 5**; Spencer 1993, 15, 21, 33, l.27.20, 22, 23, 24, 27, 29, 30g, 30j, 30.l) and el-Balamun (**map 4**; Spencer 1999, 77, pl. 87). A number are serrated. Spencer gives the length and width measurements for the 9 blades from el-Ashmunein. I calculate the mean measurements as indicated in the table below. Tillmann (1992, 259, fig. 145) illustrates three Saite Period sickles from Buto (**map 4**). Petrie (1909, 12, pl. 28. 17-20) illustrates sickle blades from the houses adjacent to the Temple of Meremptah. Other examples are now in Salford Museum (169.1908-173.1908)[7]. (The temple is 19th Dynasty but the houses are later, probably Ptolemaic date (Petrie 1909, 11).

The fact that the type continued so late suggests that copper alloy was not really a viable alternative, either because of the ready supply of flint compared to that of copper or because flint was in some ways superior. Steensberg (1943, 11-26) and Coles (1973, 34-39) demonstrated that flint sickles are better than copper ones and equal to bronze. It was only when iron was commonly used in the Late Period that flint had a functional competitor. Then, there is the 'added value' of flint, in that it was not only a functional material but had religious significance.

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Qantir Type B	17	43.67±6.8mm	25.11±5.79mm	7.33±2.42mm	Tillmann 1992 (1)
Qantir Type A	59	46.45±12.44mm	22.63±5.82mm	7.03±6.70mm	Tillmann 1992 (1)
Memphis NK-TIP	29	47.55±15.87mm	26.43±7.44mm	5.5±2.1mm	Giddy 1999
Amarna 18th Dynasty	23	60.97±19.52mm	26.43±7.44mm	7.39±3.13mm	British museums
el-Ashmunein 3IP	9	46.33±14.52mm	20.11±5.34mm	---------	Spencer 1993

Table 13 : New Kingdom and later sickle blades

1. These were Tillmann's 1992 calculations, not my own.

[7] I thank Tom Hardwick for drawing may attention to the Salford material.

If the results from all periods are compared they are as follows:

Site (period)	Number	Mean length	Mean width	Mean thickness	Data source
Abydos Early Dynastic	53	43.24±10.81mm	12.31±1.99mm	3.82±0.85mm	British museums
Buto OK	16	45.3±9.87mm	13.28±1.44mm	4.14±1.13mm	Tillmann 1992 (1)
'Ayn-Asīl Late OK-1st IP	tabular 87-straight -------- 43-end sickles	48mm-straight ---------- 61mm-end sickles	24mm-straight ---------- 25mm-end sickles	5mm-straight ---------- 6mm-end sickles	Midant-Reynes 1998 (2)
'Ayn-Asīl Late OK-1st IP	75 on brown-black flint	47mm	12mm	4mm	Midant-Reynes 1998 (2)
'Ayn-Asīl Late OK-1st IP	20 made on pink flint	39mm	13mm	3mm	Midant-Reynes 1998 (2)
el-Ashmunein 1IP	21	54.71±16.85mm	17.19±7.25mm	----------	Spencer 1993
Tell el-Dab'a MK	19	40.73±12.96mm	18±3.85mm	4.64±1.15mm	Tillmann 1992 (1)
Various MK	38	57.10±13.48mm	14.31±3.49mm	4.06±1.41mm	British museums
Qantir Type B-NK	17	43.67±6.8mm	25.11±5.79mm	7.33±2.42mm	Tillmann 1992 (1)
Qantir Type A-NK	59	46.45±12.44mm	22.63±5.82mm	7.03±6.70mm	Tillmann 1992 (1)
Memphis NK-TIP	29	47.55±15.87mm	26.43±7.44mm	5.5±2.1mm	Giddy 1999
Amarna 18th Dynasty	23	60.97±19.52mm	26.43±7.44mm	7.39±3.13mm	British museums
el-Ashmunein 3IP	9	46.33±14.52mm	20.11±5.34mm	---------	Spencer 1993

Table 14 : Sickle blades, all periods

The above suggests that the tabular blades from 'Ayn-Asīl are an anomaly. If these are not considered, width of blades in particular increases through time.

7.4.10 Chisels

The most distinguishing feature of this group is that they have a sharp end at one which is applied to the material to be worked and a flat end at the other to facilitate hammering. Interestingly, the determinative for a sculptor is a knife, presumably not simply referring to the knife form, but the material, *ds*.

The marks left on certain stones led Engelbach (1929) to conclude that Egyptian sculptures used a tool like a mason's pick. Stocks, quoting Theophrastus (Stocks 1988, 252), suggests that the Egyptians may well have used stone chisels and picks. He repeats Theophrastus' claim that iron was not used on hard stone. Experimental work shows iron and copper and bronze to be ineffective on hard stone (Stocks 1988, 2003). Flint replicated the results of Egyptian tooling and Stocks cites an 18th-19th Dynasty wooden mallet from Deir el-Bahri (map 7; Bolton Museum 48.06.67) which appeared to show impressions of a flint rather than metal chisel (Stocks 1988, 265).

Stock's work suggests that even in the Late Period, tools for working hard stone appear to have been of flint, though iron and copper or bronze may have been used for softer stone. Devaux (2000) agrees with this stating that stone, rather than metal, was used for working hard stone until at least the 26th Dynasty.

No hafted chisels have been identified though it is possible that pointed blades may be hafted chisels. BM EA67621 from Middle Kingdom Lahun (maps 4 and 5) has what appear to be traces of mastic along the blade suggesting hafting. The shape suggests a fine chisel. Stocks (1988, 254) points to a group of pointed blades from Lahun which may have been used for such working. These are flat at one end, which would be hit with a hammer, and pointed at the other e.g. MM 248.

7.4.11 Blade Knife

Blade knives tend to be Predynastic in date (e.g. Holmes 1989, 402 fig. A.2b; Petrie and Quibell 1896, pl. 73. 68 and 71). However, UC7589 from Lahun purports to be of the Third Intermediate Period. As I know of only this example, I assume it is intrusive from an earlier period.

7.4.12 Microdrills

Plate 27.

Hikade (2004–2007, 13–15) calls these borers. However, microdrills differ from those I have defined as borers by their small size and fine retouch. Microdrills vary in length from 16 to 58mm. The group was defined by Holmes (1989, 399): 'They are a distinctive kind of small perforator made on bladelets where the drill tip is shaped by direct, small, normal retouch along both lateral edges which sometimes continues along the entire length of one or both margins.'. The type is not confined to Egypt but also occurs in the Levant until at least c.1950 BC (Rosen 1997, 71).

Larsen (1935, 80, fig. 19) based on Lugn (1932) divided microdrills into three types based on their overall shape – obelisk, needle and droplet, though with transitional types. Rosen (1997, 68), in describing similar tools from the Levant sees 4 types – single shoulder, double shoulder, straight, triangular, narrow.

No microblade cores were seen in British museums and I know of no published examples. However, it may be assumed that their manufacture was carried out in a similar way to other microblades made into drills, for example those of the Chumash of southern California (Arnold 1987). At Elephantine (**map 8**) these borers seem to have been struck from local rather than imported flint (Hikade 2004-2007, 14).

Where microdrills are found they seem to occur in large quantities, perhaps a result of their specialized function. This introduces problems of sampling for the quantitative analyst (e.g. Rosen 1996, 148). A number of beads seem to have been manufactured in the temple complex of Predynastic-Early Dynastic Hierakonpolis (**maps 2, 6 and 8**; **fig. 2**; Quibell and Green 1902, 11-14). Those from Hierakonpolis HK-29 vary from 18 to 58mm in length, with an average of 20.2mm (Holmes 1989, 399, fig.A.1i); those from Kom el-Ahmar at Hierakonpolis average 19.7mm (Quibell and Green 1902; Holmes 1989, 399) dating from the time of Naqada Iib-d to Dynasty 1; and from Gerzean Abydos measuring 16 to 48 mm (**map 4**; Holmes 1989, 399; Peet, 1914, 3. pl. 3a). 60 microdrills, less than 3cm long were also found at late Old Kingdom- First Intermediate Period Elephantine (Hikade 2004, 2007).

Dating

Hikade (2004-2007, 13) states that these tools have been found in Egypt from the Neolithic onwards. They are usually considered Pre-Early Dynastic and as stated above, have been found on several Pre-Early Dynastic sites.

Larsen (1935, 80, fig. 19) reported the finding of c.7000 examples at Abu Ghâlib, on the desert edge of the Delta (**map 4**), apparently a Middle Kingdom town. Kemp (1989, 161-166) discusses them: 'Their contemporaneity with the Middle Kingdom town cannot be disputed, despite the fact that when viewed out of their context they have the appearance of being prehistoric'. However, Bagh (2002, 42) states that with the evidence of the associated large type bread mould and the parallels from Abydos and Hierakonpolis (**maps 2, 6 and 8**) 'it is obviously imperative to look into the question again and consider the possibility that the microdrills were indeed Prehistoric…'. The microdrills were largely dated due to their connection with pottery seals and seal impressions (Bagh 2002, 32) then dated to the Middle Kingdom. While

the majority of microliths from Microlith Hill could well be of this date, the problem remains that others were found on the settlement (Larsen 1941, 48), which appears to date from the Old to the Middle Kingdom. It seems we shall have to await Tillmann's report in the final publication on this settlement (Bagh 2002, 43). However, much of the other flint material from the site (illustrated in Larsen 1935 fig.18 and Larsen 1941, fig. 23), and particularly the knives, fit a Middle Kingdom, rather than Old Kingdom, date. However, the possible axe (Larsen 1935 fig. 18 no 22) is comparable with Early Old Kingdom examples (see section on axes). Larsen himself recognises the Middle Kingdom parallels for the knife in tools from Lahun (**maps 4 and 5**; Larsen 1935, 79).

First Intermediate Period to Middle Kingdom micro-drills were found at the East of the Sacred Lake at Karnak (**map 7**; Debono 1982, 382; Debono 1994, 48) which Debono postulated were used for working carnelian and mother of pearl.

Use

Their shape, experimental archaeology, and find context suggests these are drills. Altınbilek *et al.* (2001) showed similar flint drill bits easily drilled holes in both hard and soft stones. A cache of bead making equipment was found at Hierakonpolis which Quibell and Green (1902) ascribed to the Old Kingdom. It consisted of hundreds of microdrills plus bladelet cores, bladelets and other items of debitage as well as broken carnelian pebbles and partially made beads. This suggests that those who manufactured the beads also manufactured the tools. Hikade (2005-7), however, believes the Elephantine (**map 8**) examples were used for making stamp seals.

7.4.13 New Kingdom Backed Blades

Tillmann (1992, 101, pl. 23, 5–7) describes 3 backed blades from Qantir (**maps 3 and 4**) measuring between 50.3 and 57.2mm long and between 14.9 and 16.5mm wide.

7.4.17 Steep-ended scrapers

Plate 70.

I have only found this type at Panhesy's House Amarna (**maps 3 and 5**), thus of 18th Dynasty date. They measure between 6-13cm in length, 3-5cm wide with parallel transverse edges and a steep retouched proximal end. There is evidence of longitudinal wear. Given the cattle processing probabilities of this site it seems that they could well have been used for hide processing.

8. Flakes

Flakes are almost as wide as they are long. It is probable that unretouched flakes were used as tools (as has been suggested for blades- see above). Occasionally, waste unretouched flakes are found, for example at the workman's village of Amarna (**maps 3 and 5**; Miller 1987b, 149-150, fig.11.2.4). These may correspond to the same type as Spurrell's (1894, 37) thin, flat cortical flakes found at Amarna see Manchester M2511. Sometimes, unretouched flint flakes are found in New Kingdom burials e.g. at Abydos (**map 4**; Peet *et al*. 1913, 30, pl. 7., fig. 6). Flakes may also be used to make sickle blades (see sickle blades), borers (see below) as well as knives (see above) and scrapers (see below).

8.1 Scrapers

Plates 28-32.

These are sometimes simply described as 'retouched flakes'. A number of Early Dynastic examples, it will be seen, are made on primary flakes. Others are made on secondary flakes or on tabular flint. In some instances it is not possible to tell if blades, flakes or tabular flint is utilised. They are grouped together here by virtue of being large, flattish tools with retouched edges suitable for scraping. Retouch is usually dorsal. They may be unifacial or bifacial. The types sometimes called 'double endscrapers', more commonly, 'razors' are discussed above (**7.4.4**) as they are made on blades to a very specific pattern.

Usual typologies of scrapers, including Hikade's (2004), tend to use shape as a categorisation devise. Some scrapers appear *ad hoc* in shape while others, such as finely made triangular scrapers, appear deliberately shaped. There is a continuum between the formal and informal types and ovate forms may in some cases simply be worn, resharpened triangular forms. Nevertheless, certain shapes do predominate – ovate and triangular forms.

Function

Scrapers may have been used as cutting knives rather than scraping. While microwear analysis may indicate function, this has not been carried out for Egypt. However, a number of Egyptian scrapers resemble those found in the Levant where McConaughy (1979) has suggested a range of functions based on microwear analysis. Particularly large examples may have been used as axes for chopping, others may have been used for cutting, or scraping stone vessels (Stocks 1999, 141). Stocks suggested that for the

shaping of stone vessels, the sharpness of flint would be superior to copper tools and that flint was used for scraping out the shoulders, necks and rims of the vessels. Additionally, blades and flake scrapers seem to have been used for working limestone in the 3rd Dynasty Tomb of Ranefer (Petrie 1938, 30). See below, for triangular scrapers and fish preparation.

Ad hoc tools, one would imagine, would be used for activities where the tool might be quickly damaged. Such activities might include the scraping of tomb walls to level the surface. One would assume that formal tools, especially those more finely made, were intended for more long-lived activities and perhaps also for display.

This brings us to the question of whether or not any scrapers had ritual use, as has been suggested for tabular scrapers in the Levant (McConaughy 1979, 304; Rosen 1997, 74). Spencer (1980, 92) states, 'some of the implements from Saqqara (**map 4**) must have been made specifically for the tomb, as three pieces of a broken scraper were included in the burial equipment.' Additionally, the careful workmanship of some of the very regular triangular scrapers, in particular, suggests that they were not purely utilitarian.

8.1.1 Tabular Scrapers

In the Levant, there is a certain amount of justification for arguing that tabular scrapers are a distinct group as the cortex appears to have been deliberately retained and there is evidence for ritual use of the artefacts (Rosen 1997, 74-75). However, in Egypt the fact that tabular scrapers are largely used in the Delta, where other tools are often made from the material, might suggest that the Egyptians were simply utilising a common material.

Hikade (2004, 61) dates 'tabular scrapers' to Naqada I/II, arguing, however, that true tabular flint scrapers do not occur in Egypt. 'Tabular-like' scrapers are common at Predynastic Maadi (**map 4**; Rizkana and Seeher 1988, 15). Tabular scrapers are also apparent in the Dynastic Period particularly in the Dakhla Oasis (**map 3**) e.g. Old Kingdom–First Intermediate Period ʿAyn-Asīl (Midant Reynes 1998, pl.16–24) and at ʿAyn el-Gazzareen (Kobbuseiwicz 2003, figs. 1–2). Most appear *ad hoc* or ovate in shape. Tools are roughly shaped with a prominent bulb of percussion suggesting that hard hammer was used.

8.1.2 Round and sub-round scrapers

Plate 30.

Round scrapers are similar to triangular scrapers and may even be incomplete or worn forms of the latter. Hikade (2004, 63, fig. 2.7–10) dates round scrapers from Naqada II to late Old Kingdom). They range from 5 to 11 cm in diameter.

Included in my group 'round and sub-round scrapers' are Hikade's separately categorised group 'flat, oblong scrapers' which are made on a primary flake and date from Naqada – 2nd Dynasty (**map 6**; Hikade 2004, 63, fig. 2.2–6). Unlike Hikade, I prefer not to separate out the 'flat, oblong scraper.' Only one of his examples, from Tell Ibrahim Awad (fig. 2.1.6) is truly oblong, the rest are ovate. Manufacture from a primary flake is true of a number of other shaped scrapers. Hikade (2004, 63) himself states that early triangular scrapers have cortex.

Examples from British museums include M5382A which is made on a primary flake, M5385A-D, and M5392E from Early Dynastic Abydos (**map 4**) all of which exhibit cortex; M4827 (**plate 30.1**) from 1st Dynasty Giza (**map 4**) is made on a secondary flake or blade. M5390C is bifacial and oblong in shape (**plate 30.2**). There is also an 18th Dynasty example from Amarna (**maps 3 and 5**; Ashmolean 1893, 1-41, 929; **plate 30.4**).

Published examples include BM EA 68117 from 1st Dynasty Saqqara (**map 4**; Spencer 1980, 99, pl. 78. no. 742w); an ovate shaped flint from Early Dynastic Abydos (Peet 1914, 34, pl. 9); an example made on a flake from Old Kingdom Giza (Conard 2000, 33, fig. 4.1); Berlin 18007 from 1st Dynasty Abydos (Scharff 1931, 64, pl. 6.110).

8.1.3 Triangular scrapers

Plates 31 and 32.

Petrie (1902b, pl. 21) refers to Abydos (**map 4**) examples as 'tailed scrapers', though they are more usually known as 'triangular scrapers'. As their name suggests, these artefacts are relatively flat with three edges, all, or some of which, may be retouched. While retouch tends to be dorsal, it is sometimes ventral. Ventral thinning of the bulb of percussion has been noticed at Giza (**map 4**; Conard 2000, 33–34). Conard states that examples of tools from the Mycerinus Valley Temple in the Boston Museum of Fine Arts also show ventral thinning.

Size is very variable ranging from 4cm to 8cm in length. Earlier examples appear larger. Those from the 1st Dynasty tomb of Hemaka 60–120mm long and 60–120mm wide. In general, most have a length x width size of between 2000 and 4000mm square. Hikade (2004, 63) divides the type into lighter examples of less than

40g and heavier examples of more than 50g. I found no evidence of two distinct groups, though the database of those from British museums and those published was small and examples from British museums were not weighed and weights are rarely given in published reports. Tillmann (1992, 170–172) looked at the 135 examples from the grave of Hemaka in Saqqara (**map 4**) and saw a continuum in sizes. He also states that some examples from Elephantine (**map 8**) had lost their original triangular shape through resharpening.

While a number are unifacial, others are bifacial. Hikade (2004, 63) states that the earlier ones may have cortex (e.g. Kromer 1978, pl. 12). Many appear to be made on a flake. A number appear to be broken, either in use, or were perhaps manufactured from broken flakes. At Giza (**map 4**), Conard (2000, 33, fig. 4) reports that triangular scrapers were made on tabular flint. Spencer (1980, 92) notes that those from Abydos (**map 4**) are of better quality than those from Saqqara. However, the illustration of the triangular scrapers found in the tomb of Hemaka at Saqqara (Emery and Saad 1938, pl. 11) appears to show some very finally made examples.

Dating

These tools largely date from the 1st to 4th Dynasties though there are very occasionally later, even Middle Kingdom, examples. Hikade (2004, 63, fig. 2.11–14) and Kromer (1978, 30–33 fig. 12) state that this type dates from the Early Dynastic to the 4th Dynasty. Tillmann (1992, 172) dates the latest examples to the end of the 4th Dynasty or beginning of the 5th. Large triangular scrapers (Kromer 1978, 30ff pls. 4–6; Schmidt 1989b, 301 fig.15, 17) date from the Early Dynastic to the Old Kingdom.

Early examples include: 1st Dynasty examples from burial chambers and magazines of the elite at Saqqara (**map 4**; Emery 1938, 20ff; Emery 1954, 67, pl. 34; 1958, 85, pl. 125) which are 2.8 to 10.5cm in length. Others from 1st Dynasty Saqqara come from a ‘middle class cemetery (Macramallah 1940, fig.19). Some appear more rounded than triangular. Also amongst the earliest are those from mid 1st to mid 2nd Dynasty Helwan (**map 4**; Hikade 1999, fig. 2d). Old Kingdom examples come from Kom el-Ahmar (**maps 2, 6 and 8**; Pawlik 2005, 205 fig. 25) and 4th Dynasty examples are known from Giza (**map 4**; Kromer 1978, 30-33).

Middle Kingdom examples appear to come from Lahun (**maps 4 and 5**; UC7574i and L56.20.63, the former is illustrated on **plate 32**), though these examples are very roughly made compared to earlier types. It is possible that they were picked up from the Old Kingdom sites in the vicinity. However, Tillmann (1992, fig. 67.1;

and **plate 28**) illustrates a triangular tool fragment which comes from 12th Dynasty Tell el-Dabʿa (Tillmann 1992, 143-145) which he describes as an axe or chopper ('Hacken') although admitting that such an example is unusual. However, it is similar to the 1st Dynasty scrapers from Saqqara (**map 4**; Spencer 1980, 99. 742 pls. 77, 78.79). It may alternatively be a hoe, but is rather too thin to be a hoe. Like UC7574i and L56.20.63, it is made on a secondary flake.

There is perhaps some evidence of change in form during the Old Kingdom. Late 4th Dynasty triangular scrapers from the pyramid and associated structures of Menkaure at Giza (**map 4**) are described by Reisner (1931, 230, pl. 18). He (1931, 230) states: 'The flints of type IV [triangular scrapers] from the Third Dynasty, and from the Mycerinus group are distinctly less well worked than those of Khasekhemuy'. Hikade (1999, 53) adds 'In addition, the shape of some Old Kingdom scrapers is more oval and has not the strict triangular outline of their predecessors.' However, it could be that the decline in standard is not real but rather a factor of different standards in different places.

Function

A similar type also occurs in the Levant in the Chalcolithic and Early Bronze Age (Tillmann 1992, 69–70; Rosen 1997, fig. 3.31). From use-wear analysis, it is appears that these were used as knives (McConaughty 1980, 53; Tillmann 1992, 170). I know of no use-wear analysis of Egyptian pieces though Werschkun (2007b, 254) states that some seem to have been used for planing wood. However, the careful manufacture, often slightly curved edge would suggest that these may well have been used for cutting rather than scraping. Ikram (1995, 65, fig. 14.K) describes a triangular 'knife' depicted as being used to gut fish. Certainly, the 18th Dynasty tomb of Paheri at el-Kab (**maps 6 and 8**; EK3) shows fish being prepared (either gutting or descaling) using a triangular shaped implement (seen by the author April 2008). Unusually, M4828, on examination, appeared to have traces of ochre.

There is some evidence however, that triangular scrapers had some special significance. Hunt (http://www.aeraweb.org/spec_flint.asp accessed January 2007) states that flint items made from imported flint, including triangular scrapers, were found mainly in the Courtyard of the Royal Administrative Building at Giza (**map 4**) and it is possible that such artefacts were confined mainly to more highly skilled or higher status workers. Most found within burial contexts come from wealthy graves, though most flint items in general come from wealthy graves. Kromer (1978, 33) states

they are found not only in the graves of kings but in the cemeteries of the Middle classes. Nevertheless these 'Middle classes' were not the majority but rather an elite class. Emery (1954, 67) describes triangular scrapers measuring from 6.0 to 10.5cm long found in the elite tombs of 1st Dynasty Saqqara (**map 4**) and 135 examples are known from the 1st Dynasty tomb of Hemaka at Saqqara (Emery and Saad 1938, 18–19, pl. 11, Emery's types 2-7). These were placed in magazines, some in leather bags.

Examples

As well as those publications mentioned above, the following also include triangular scrapers. At least one 1st Dynasty example is known from 'Macramallah's Rectangle' at Saqqara (**map 4; 5.2.4.3**; Maccramallah, 1940, fig.19). Some are known from 1st Dynasty Abydos (**map 4**; Spencer 1980, nos. 731, 732, 733, 98). Those from cemetery sites now held in British museums include examples from 1st Dynasty Giza (**map 4**; e.g. M4822, M4826, M4828) and Early Dynastic Abydos (M5382B, M5385B, M5392A, H3872). There are examples from the tomb of Khasekhemwy in the Pitt Rivers Museum (PR1901.40.109–110).

Triangular scrapers are not just found on cemetery sites. UC19757 and UC21226 are from the fort of Buhen (**map 9**). A number were found at the Temenos of Abydos (Petrie 1902b, e.g. M38140). A large number were found at Giza settlement (Kromer 1978, 30–33, pl. 6) belonging to the 1st to 4th Dynasties. Hikade (2002, 316, fig. 8) discusses scrapers found at Old Kingdom Elephantine (**map 8**), some (e.g. fig. 8.c) may be classed as triangular. A large (measuring c.85x75mm) triangular scraper belonging to 2nd/3rd Dynasty Tell el-Faraʿin (Buto) (**map 4**) is described and illustrated in Schmidt (1989b, 301, fig. 15.7). Spencer (1980, 731–742) catalogues a number of both ovate and triangular scrapers from 1st to 2nd Dynasty Abydos (**map 4**), Saqqara.

8.1.4 Scraper 'double notch'

Plate 29.

This type is not identified in Hikade's scraper classification but is similar to his 'convex side-scraper' (Hikade 2004, 63, fig.3.5–9) which has no notches. There is a 'double notch' type which is wider at one end and has two, opposed notches toward the narrower end. They are retouched all the way around. These are found in the Daklha oasis, dating to the Old Kingdom and are made of tabular flint e.g. 3 pieces from 'Ayn-Asīl (**map 3**, Midant Reynes 1998, 34, photo 9, pl. 24.3) and ʿAyn el-Gazzareen (**map 3**, Kobbuseiwicz 2003, fig. 3.7).

8.1.5 Convex scrapers

Hikade (2004, 63, fig. 3.5–9) dated these to the mid 1st-mid 2nd Dynasty.

8.1.6 Scrapers made on thinning blades

Plate 29.

This group is identified by Hikade (2004, 63, fig. 3.1–4) as *ad hoc* scrapers made on bifacial thinning blades. The type dates from Naqada I to the 6th Dynasty. As would be expected, this type is small and light. Examples come from 1st Dynasty Helwan (**map 4**; Hikade 1999, 52–53, fig. 2a 2004, fig. 3.5). According to Hikade (1999, 53) they also occur at Saqqara (**map 4**), Abusir (**map 4**), and Naqada (**map 6**).

The type may possibly exist wherever there are bifacial knives. EES 947 from Kôm Rabîʿa (**maps 3 and 4**) appeared (from an illustration seen in the Egypt Exploration Society archives) to be a scraper made on a bifacial thinning blade. It dates to the mid-late 18th Dynasty.

8.1.7 Irregular Scrapers

New Kingdom sites have a number of irregular flat tools with retouched edges suggesting scrapers e.g. at Qantir (**maps 3 and 4**; Tillmann 1992, 83–85, figs. 16–18); Kôm Rabîʿa, Memphis (**maps 3 and 4**; Giddy 1999). Others from Qantir appear to be reused flakes (Tillmann 1992, 13–15). At Kôm Rabîʿa they were the second most common tool after blades (Giddy 1999, 228).

8.2 Tattooing Points

If only the flints themselves were known this type could not be identified. However, I have classified small pointed flakes set in wood as a tattooing instrument because of Petrie's prior definition, because I can think of no other purpose for such an instrument and because of its similarity to other known tattooing instruments.

While items published as tattooing points are metal (metal needles from the Petrie Museum published by Booth 2000), Petrie (1901, 24) states of a small flint flake set in wood from the tomb of Djer at Abydos (**map 4**) 'The flint set in wood did not seem capable of bearing any strain, but it was explained by my friend Prof Giglioli as a tatuing instrument of usual form....'. This instrument is also published in Spencer (1980 101.758 pl. 79).

9. Bifacial Tools and Invasively Touched Pieces.

There are few partially finished objects and quarry sites are not well investigated thus the chaîne opératoire behind bifacial pieces is difficult to unravel. Tabular flint was available and may have been exploited, especially for the manufacture of flat objects such as knives. At the Old Kingdom site of ʿAyn el-Gazzareen (**map 3**) most of the retouched tools were made of tabular flint especially knives, chisels and rectangles (Kobbuseiwicz 2003, 13). Indeed, as we shall see below (**9.1.2**), this is sometimes the case. However, we should not assume that this was always the case.

9.1 Knives

Blade knives are discussed separately.

Here the term knife refers largely to the shape; a large flat tool resembling a modern knife shape, with one specialised cutting edge. It is very possible that other items classified separately as scrapers, for example, or even unretouched blades, may have been used for cutting. Indeed, unretouched blades or flakes would have been sharper than the tools categorised here as 'knives'.

While stone knives in ancient Egypt are occasionally made from materials such rock crystal, flint is by far the most common material. Indeed, the word *ds* has the meaning of both 'knife' (of any material) and 'flint'. Bifacial knives are perhaps the most discussed flint tool in Egyptology largely as they are found in numbers, are often aesthetically pleasing, and are depicted on Old and Middle Kingdom tomb walls in slaughter scenes. The form of the knife is also used as a determinative. It is sometimes difficult to tell if a broken piece is a 'knife' or 'point', thus those in doubt e.g. M38230 I have simply called a 'bifacial point' or others which do not form a point, but are not obviously knives as a, a 'bifacial fragment'.

Egyptian flint knives are not only well known to modern Egyptologists but were perhaps well known throughout the ancient world. They seem to have been traded throughout Levant, e.g. at least one piece from Early Bronze I Erani is imported flint (Rosen 1988a). Others were transported to Byblos (Dunand 1954) and Knossos (Cadogan 1966 fig.1), both cited in Tillmann (1992, 198-199). Tillmann (1992, 199) posits that this underlines their ceremonial character.

Egyptian knife manufacture has been subject to experimental work, particularly the aesthetically pleasing Predynastic and Early Dynastic ripple-flaked forms (Midnant-Reynes and Tixier 1981; Kelterborn 1984). Replication experiments have

shown that such fine examples take about 17 hours to manufacture by modern knappers. However, the manufacturing technology is still generally poorly understood and varies geographically and temporally.

Non-ripple forms would have been much easier and quicker to produce. While it is known how to produce these, work by Marquardt Lund (pers. comm. and presented at Egypt Centre Conference May 2010) has shown that we should not assume that although we can produce the same results we are using the same methods as the ancients. Tomb pictures at Beni Hasan (**map 5**) show a method of manufacture which is not easily understood by modern knappers though Lund has attempted to copy their technique.

While it occasionally appears in the literature that roughly made knives are classed as rough-outs, a roughly made tool need not imply a rough-out as some such examples have obvious use of wear, for example M5383A, which has sickle gloss. Replication study showed that performs must be 15-20 mm in thickness (Kelterborn 1984, 439).

Some pieces seem to have been made on tabular flint (e.g. M5386 A and B from Abydos (**map 4**); also an example from Giza discussed below) and it is possible that others were also manufactured from this. Removal of the cortex has made it difficult to judge. Other pieces may have been made on large flakes removed from large cores. Flaking scars suggest that early examples were pressure flaked but those from the later Old Kingdom onwards could have been made using a soft hammer.

Manufacturing sites are hard to identify. At Giza (**map 4**), Conard (2000,37) found a number of thinning flakes as well as bifacial knives, but not enough thinning pieces to suggest manufacture. It seems that at this site knives were produced off site. A large number of undated knives have been found at Wadi el-Sheik (**maps 1 and 5**) which was a major quarry source for knives. Other quarry sources are discussed above.

It seems that the flint knife form was later copied in metal.

9.1.1 Problems of Dating, Typology and Function

Unless found in secure contexts, knives are traditionally assumed to be Early Dynastic or Old Kingdom (2686–2181 B.C.) and indeed many unprovenanced examples in museums have been assumed to be this date. Eggebrecht (1973, 114) states that from the New Kingdom knives are manufactured of metal. As we shall see, knives were also manufactured of flint later. Iconographic evidence for the flint knife is most apparent in the Old Kingdom but continues until the Middle Kingdom (see **Volume 1, page**

176-177). Textual evidence for the flint knife is largely dealt with in other chapters in **Volume 1** (especially **Chapter 6**). To summarize, textual evidence for the flint knife begins in the Middle Kingdom but seems particularly salient in the New Kingdom. We shall see that archaeologically the flint knife is extant until at least the Third Intermediate Period, though in very reduced numbers.

A number of authors have dealt with the changing form of the knife and particularly its outline form. Petrie (1902b, 8–11), Eggebrecht (1973, 111–115), Kromer (1978) and Spencer (1980, 91), in particular, concentrate on Early Dynastic to Old Kingdom forms. Eggebrecht includes Middle Kingdom knives. Ikram (1995, 64–67) and Tillmann (1992, 194–203) include New Kingdom forms. Other authors deal with knives over a narrower time scale. The varying outlines of the flint knife do seem to follow a chronological pattern, though size and other variations are chronologically relevant. Most of these typologies are of a general nature.

In this section I divide types within periods, distinguishing on grounds of whether or not they have a handle, whether the handle is hooked or straight, whether the back is convex, concave or straight, whether the blades are pointed. I also distinguish simply-made knives which exhibit a high degree of cortex and are made on tabular flint and knives which are exceptionally wide. As with all typologies, there are intermediate types and we can not be sure that the makers themselves recognized modern divisions. Finally, some divisions of type are probably a product of resharpening. Svoboda (2006) has attempted to show a sequence in shape from a complete type-4 knife to other types.

Sometimes knives have been typologised according to the side of sharpening. As will be explained below, I have not distinguished on this basis as this seems more a factor of handedness than type.

Blade retouch

The fact that one side of the cutting edge exhibits steeper retouch than the other is occasionally seen as marking a particular type, e.g. Pawlik (2005, 200-201, fig. 11), Conard (2000). Some have called this feature 'bevelling', 'snubbing' or 'Seitenbezogenheit'. It is my belief that difference in steepness of retouch between sides is a factor of handedness.

Petrie (1902b, 11) noticed that blades were often asymmetrically bevelled (he called it ‘snubbing’). ‘This snubbing is always on the side next [to] the person when the flint is held in the right hand; and was doubtless the result of scraping away from

the person. Sometimes the flint will be snubbed half the length on one face and half on the other face, having been held sometimes by one end, sometimes by the other'. This 'snubbing' is not restricted to the Old Kingdom but continues until at least the Middle Kingdom. It can be seen clearly on the example from Giza (**map 4**; Conard 2000, 25, 31, fig. 6.1).

Schmidt (1989a, 88; 1989b, 304; 1992, 86) calling the trait Seitenbezogenheit' describes the most common result where the steep retouch is on a particular side: - If one imagines the knife to be placed cutting edge side down with the point/tip to the left and the handle to the right, the steep retouch on the cutting edge will be observable, i.e. will face the view, whilst the retouch on the handle is on the side which is not observable. The technique is described in detail by Sollberger (1971) and is a means of sharpening the knife. Retouch would occur on the side described by Schmidt if carried out by a right-handed person holding the blade with the blade point away from them and the cutting edge uppermost. The handle would be shaped, again with cutting edge uppermost, but this time with the blade toward the retoucher giving a positive 'Seitenbezogenheit'. This would seem to be the natural, i.e. most comfortable way for a right handed person to retouch a knife. To deduce whether or not this factor is culturally desirable or simply a factor of a natural way of knapping one could check what percentage show 'Setenbezogenheit', i.e. the percentage showing the traits described by Schmidt; to see if it correlates with handedness in an average population. This assumes, however, that left-handed peoples did not have to hide their handedness.

If my hypothesis that this 'snubbing' is due to handedness is correct it would be expected that around 10% of flint knives would have the retouch on the 'underside' because around 10% of people are left handed. I counted knives exhibiting differential sharpening patterns. Of knives or knife fragments which were complete enough to exhibit differential sharpening, 44 exhibited right handed sharpening and 4 exhibiting left handed patterning. Some were incomplete and so the pattern for handle and blade together could not be measured. Others were complete but the shape made it difficult to tell which was the handle and which the blade. There are occasional variations on this method of sharpening e.g. Old Kingdom Buhen (**map 9**) where the handle is sharpened as is typical though the blade is not. The results fit the proportions of right to left handed people in modern populations.

Thus, particular method of retouch leading to a different appearance of blade edge which Schmidt (1989a, 88; 1989b, 304; 1992, 86) has called 'Seitenbezogenheit'

may simply be a function of the ease with which a right handed person may shape a knife.

Heavily resharpened knives

Plates 48-50.

There are several bifaces which could be heavily sharpened knives. Svoboda (2006) illustrates several of the 5th Dynasty (**plate 48**). BM EA3860 and BM EA3840 from the Fayum (**maps 1, 3 4 and 5**); UC19754 (**plate 49**) from Old Kingdom Buhen (**map 9**); M5390 from Old Kingdom Abydos (**map 4**); M38222 and M38219 (both illustrated on **plate 50**) from Middle Kingdom Lahun (**maps 4 and 5**) may also fit this group. One might also add some of the anomalous forms, however anomalous forms are here not so crudely knapped as resharpened knives.

Functions

In **Volume 1, 5.2.1** I discuss the ritual function of some Early Dynastic knives as shown by context. Additionally, the physical attributes of flint knives discussed in Chapter 4 might firstly suggest that some were used for non-utilitarian purposes. Most of the particularly fine and apparently non-functional items date to the Pre or Early Dynastic. However it is clear that some were also secular (**Volume 1, 5.2.1**). Additionally, Ikram (1995, 69) points out that tomb reliefs from Meir and Beni Hasan (**map 5**) show goats being slaughtered in fields in a purely secular context with flint knives. Furthermore, the 'secular' fish-gutting scenes in the tomb of Niankhkhnum and Khmunhotep, show knives shaped like slaughter knives (Altenmüller and Moussa 1977) and since this is 5th Dynasty they would probably be flint. The problem is that one might state that anything on a tomb wall is likely to be subject to religious stricture.

It should be pointed out that these formal bifacial tools were probably used in killing the animal rather than hacking up the carcass. It is likely that large flakes roughly made and soon discarded would have been used in actual cattle butchery. So, for example the tools associated with the butchery of cattle at Panhesy's Great Aten Temple House at Amarna (**maps 3 and 5**), are expedient type tools (Graves-Brown 2009).

Metal knives

While it seems that at least some bifacial flint knives were used in ritual slaughter, we cannot be sure if it was the form or the material which was significant. Ikram (1995,

70) states that metal knives could be used in New Kingdom rituals. Indeed, an unprovenanced 18th Dynasty knife now in the Rijksmuseum van Oudheden is decorated with a Bes image and a scorpion (F1984/4.3; Schneider 1997, 86, no. 118 cited in Stevens 2006, 205). An 18th Dynasty Egyptian style chapel at Askut (**map 9**) included remains of cult material. At the entrance to the sanctuary were balls of incense and a metal knife (Tyson-Smith 2003, 125).

Knives as sickles, etc.

Plate 41.

Some finely made flint knives are now thought to have been used for reaping. A sickle with separate teeth may have been considered more robust, easier to repair and as efficient. However, there is some evidence that knives of the shape usually categorised as butchery knives were used as sickles. For example, the late Old Kingdom crescent shaped bifacial blade from Aïn Asil, Balat (Midant-Reynes 1998, 35, pl. 37; Roubet 1982; pl. 43) is similar to a 'knife' though the back is denticulated. Other knives have been found with silica gloss (Christensen *et al.* 1992, 493), though here the examples were Predynastic. M5383A has gloss which looks to the eye to be sickle gloss (Early Dynastic Dynasty 0–II). Tillmann (1992, fig. 76) shows a blade of the Old Kingdom from Tell el-Dabʿa with sickle gloss. The piece is broken but has the appearance of a straight-backed knife. Silica gloss can also be produced through friction with wood (Jensen 1993). Werschkun (2007, 158) reports use-wear on some Giza (**map 4**) bifacial knives which is consistent with woodworking.

Reused knives

Broken knives appear at times to have been reused as wide edge chisels or scrapers, with a broken end being retouched, as in UC7569vi and UC7569iii from Lahun (**maps 4 and 5**), now in the Petrie Museum.

9.1.2 Predynastic to Early Dynastic knives

Plate 33-40.

While this group deals with examples of knives which start in the Predynastic and continue into the Early Dynastic, ripple-flaked knives which are largely confined to the Predynastic are not considered here. While it is possible that there are some Early Dynastic ripple flaked knives, I know of know clear examples. PR.1901.40.24.9 and PR.1901.40.24.3, now in the Pitt-Rivers Museum, are both fragments of bifacial

knives from the tomb of Djer at Abydos (**map 4**). As these are burnt tips we cannot say if they are of the ripple-flaked type or not, they may be polished type-4 fragments.

However, it may be apposite to mention a factor of these earlier knives which may continue into later periods, that is differential treatment of their sides. Midant-Reynes (1987) has suggested that the different treatment of the front and back of Predynastic ripple flaked knives may reflect ancient Egyptian cosmology. Certainly the importance of binary opposites seems to have been important in Egyptian cosmology and art often reflects this with deities placed opposite one another in pairs. I have wondered whether later knives might also show differential treatment.

There are occasional later knives which appear to have differential treatment on each side. M38243 and M38237 (Middle Kingdom) appear abraded flat on one side but this may be due to reuse of knives as both fragments were broken. M239 (Middle Kingdom) has a dark and light side. The light side has wide and few scars, the dark side has narrow and many scars. This knife has not been used and is not broken. However, these examples are few within a total sampled knife population of 307 (including fragments), thus differential treatment is not common.

Predynastic to Early Dynastic forms show the greatest knapping skill, using pressure flaking to produce large blades of narrow width. Knapping is extremely regular and the edges of some tools almost look as though they were drawn with a ruler (e.g. Pitt Rivers 1901.40.24.9 and 1901.40.42.10 from the 1st Dynasty tomb of Djer). Additionally, flake scars are shallower and smaller than later examples. After the Early Dynastic, knives cease to exhibit the same kind of care and skill. However, even in the Early Dynastic there are also very rough examples. It is noticeable that the large, finely made types come from royal tombs. It could be that the so-called decline is merely the cessation of royal tombs.

There are examples from this period with wooden handles, for example Berlin 18999 from early 1st Dynasty Abusir el-Meleq, tomb 1029 (**maps 4 and 5**; Scharff 1931, 53, pl. 4.65). Since one cannot see the shape of the knife beneath the handle it is difficult to categorise this example, though the date and visible shape best fit type-2.

Some types, particularly types 3, 5 and 7 may well be heavily resharpened versions of other types.

Unifacial knives with cortex Type-1

Plate 33.

Some largely unifacial rough examples with cortex also belong to the Early Dynastic–Old Kingdom. Whether these are rough-outs, or simply less carefully made pieces, is not clear. They tend to be smaller than carefully produced pieces, suggesting they are not rough-outs.

Such pieces begin in the Predynastic Period (for example, a tool described as a 'scraper' from Hierakonpolis Locality 6 (**maps 2, 6 and 8; 5.2.4.2**; Adams 2000, 148, fig.13) and another, also described as a scraper features in Payne (1993, 193 no.1585, fig. 70) from Naqada South Town (**map 6**).

Examples in British museums include: M5386A and B from Predynastic-Early Dynastic Abydos (**map 4**) measuring 103.2x48.5x11.4mm and 120.5x43.3x9.8 respectively. Spencer (1980, 94 no.684, pl. 75) describes a similar unifacial knife (BM EA68120) from 1st Dynasty Saqqara (**map 4**) tomb 3505 as 'a non-functional model tool for funerary purposes….'. This piece also has cortex but unlike those from Abydos has a rudimentary handle. It measures 107x38x11mm. A fragment of another made on a flake and with a handle is known from Early Dynastic Helwan (**map 4**; Hikade 2005b, 70, pl. 42.4). From ʿAyn-Asīl (**map 3**, Midant-Reynes 1998, pl. 26.1; pl. 27.1; pl. 29; pl. 40.2) come Old Kingdom–First Intermediate period tabular roughly shaped knives with cortex.

M5386A is made on tabular flint (cortex is apparent on two right-angled sides). While it could be argued that the piece is simply struck from a nodule with an angular surface, this would imply a very unusual shaped nodule. It is more likely that this is indeed tabular flint. Liverpool 56.20.110 from 3rd Dynasty Koptos (**map 6**) has cortex on opposing blade sides. M5386B has one flat cortical side and is also likely to be made on tabular flint. Pawlik (2005, 93) states that the tabular flint from Wadi el-Sheik (**maps 1 and 5**) was particularly suited to bifacial knives and adze blades.

Unifacial knives may be related to tabular-like scrapers. McConaughty (quoted in Hikade 2002, 61) has shown through microwear analysis that Levantine tabular-scrapers are most likely used as cattle slaughter knives. See **Section 8.1.1**.

Comma shaped knives (Type-2)

Plates 34 and 38.

This type begins in the Predynastic and is called by Holmes, the 'comma-shaped knife' (Holmes 1989 II, 405, fig. A.5). These early knives appear not to have had shaped flint handles, though may have been hafted. They were produced with concave backs. The type includes the finely shaped 'ripple flaked knives' (Holmes 1989 II, 408, fig.A.6)

examples of which are Predynastic or even Prehistoric (e.g. Baumgartel 1955, 33). This comma shape is defined as having a point at one end and a wide curved section at the other (Holmes 1989, II, 405). By the Early Dynastic Period both ends tended to be more pointed (e.g. Kromer 1978, fig. 11.3). UC16205 from 1st Dynasty Abydos (**map 4**) has no handle, a concave back but is rounded at both ends. This type resembles some Middle Kingdom types, for example that illustrated by Spurrell (1891, pl. 7, 16) which is from Lahun (**maps 4 and 5**).

One comma shaped knife from Abusir el-Meleq tomb 1029 (**maps 4 and 5**) of the early 1st Dynasty (Berlin 18999, Scharff 1931, 53, pl. 4.65) was found with a wooden handle. It measured 15.5cm long. Other knives were found at Abydos (Petrie 1902b, 10-11, pls. 15 and 16). An extremely rough and unusable example was found as an offering at 1st Dynasty Abydos (Petrie 1903b, 27, pl.10.228). Reisner (Reisner 1908, 112, 40b) found a 2nd Dynasty example from Naga ed-Dêr (**map 6**).

There is overlap between knives without cut-out handles and comma shaped knives, and both may be found in the same context. At Abydos, Petrie (1902b, 11) found both types in the same levels. 1st Dynasty examples with handles were found in the same grave as a comma shaped knife without handles in the great tombs at Saqqara (**map 4**; **fig. 3**; Emery 1958 11, 66-68; III, 51, 84).

Plain knife without handle (Type-3)

Plates 34 and 38.

These bifacial knives are very similar to comma shaped knives, but are straighter and breadth is reduced. Reisner (1931, 230, pl. 18) illustrates the type dating from the late 4th Dynasty. His example is slightly thinner at one end than the other. E5118 from a 1st Dynasty royal tomb at Naqada (**map 6**) is much more symmetrical (**plate 34**). Type-3 may at times be a heavily resharpened version of other types, especially as few examples are known. The thickness, crudity and sharp retouch apparent on E5118 is congruent with resharpening[8]. The type is less finely knapped than the Middle Kingdom Type-1. Svoboda (2006) illustrates several examples from the Raneferef mortuary complex which he sees as a result of heavy resharpening. However, Svoboda's fig.2.11.4 (2006, 505), is, according to the author, only lightly resharpened yet takes the form of a plain knife without handle.

Other possibly highly resharpened knives are discussed above.

[8] It is more difficult to tell from illustrations of published examples just how 'fine' knapping is.

Concave back, cut-out handle (Type-4)

Plates 35 and 38.

Knives with handle gradually supersede those without. As stated in the sub-heading this type has a concave back and cut-out handle. It is usually long, and, like type 6, is well made. These knives usually measure between 35 and 44.5 cm in length. The handle is always hooked. The blade tip is usually rounded. Some are broad (e.g. Ipswich Museum IPSMG: R.1922-55.3 from the tomb of Djer see **plate 35**), while others are much narrower (e.g. M6773 from Abydos; **map 4**; **plate 35**). However, the handle is not always strongly hooked and sometimes the tip is more pointed, for example, Tell el-Faraʿin (Buto) (**map 4**) dating from Dynasty 0/1 (Schmidt 1989b, 404–405, fig.16) has a pointed tip. An example from Helwan (**map 4**; Saad 1951, pl. 63) has a pointed tip but a strongly hooked handle. A 3rd Dynasty example, but with only partially hooked handle, comes from tomb K1 at Bet Khallaf (**map 6**) dated to the time of Djoser (Garstang and Sethe 1902, 18, pl. 15). The handle tends to be shaped for use for right-handed person to comfortably hold, so that sharpening of the underside of the handle would have been have been done with the cutting edge uppermost and the point of the blade toward the person shaping the handle (see the section on handedness, **Appendix 1, pages 445-447**).

The type dates to the Early Dynastic Period. A number were found at Early Dynastic Abydos (Amélineau 1904, pl. 17). In the great tombs at Saqqara (**map 4; fig. 3**; this type of knife occurred in the burial chamber in pairs (Emery 1958 III, 14, 51, 84) though elsewhere stored in magazines (Emery 1958 II, 66). They did not appear in subsidiary graves. An early example, measuring 27cm long, is known from a middle-class tomb at 1st Dynasty Saqqara (Macramallah 1940, 47, fig. 18, pl. 50.5); the dating is suggested by inscriptions bearing names of 1st Dynasty kings found in the burial contexts. One example even has the name of king Den etched into the knife itself (Lund 2008, 11; Malek, J, Magee, D., Fleming E. and Hobby, A. 2009, http://www.griffith.ox.ac.uk/gri/3cairo.pdf. Cairo Egyptian Museum, page 626). A late 1st Dynasty example was found in the cemetery of Naga ed-Dêr (**map 6**; Reisner 1908, 112, pl. 40a). Other published examples include those from the 1st Dynasty tomb of the noble Hemaka at Saqqara (Emery and Saad 1938, 19, fig. 5, pl. 11) which are 24-41cm long; examples from 1st-2nd Dynasty royal tombs at Abydos (**map 4**; Petrie 1902b, pls. 14, 15). More roughly made examples come from the temple area and are probably early Dynastic (Petrie 1902b, pl. 18). Examples from the royal tombs at Helwan (**map 4**) are believed by Hikade to date from the late 1st to end of the early

2nd Dynasty (Saad 1951, pl. 7b, 8; Hikade 1997, 88, footnote 7; Hikade 1999, fig.4). One of these was 41.5cm long (Saad, 1951, pl. 7; Hikade 1997; Hikade 1999, 55 fig. 4) and another broken example was 50cm long (Saad 1951, pl. 63b).Wood (1987, 66, pl. 5) and Wilkinson (1996a, 342) date the tomb from which these came to late 2nd Dynasty. A Naqada - 1st Dynasty example is published in Quibell (1905, no.11981). A particularly fine example of this type in the Royal Ontario Museum comes from the tomb of King Djer (Needler 1956, pl.3.1) and is 37cm long. This example had a gold foil handle. A much more roughly made example is BM EA68718 from the 1st Dynasty tomb of Semerkhet at Abydos (Petrie 1902b, pl. 15; Spencer 1980, 94, pl. 74.676).The largest found is that from the tomb of Khasekemwy at Abydos published by Hikade (1997), which was 72cm long.

A late example from a 5th Dynasty deposit comes from Elephantine (**map 8**; Dreyer *et al*. 1976, 87, fig.26e; Dreyer 1986, 87, 136.351, fig. 45). Though, given its appearance as a votive deposit it may be that this is a knife which had been carefully curated and handed down before deposition. Dreyer (ibid.) suggests such knives are found in the 3rd Dynasty though I know of none, except a possible example from Bet Khallaf (**map 6**), cited above. A similar shaped knife to Type-4 is shown iconographically on a cylinder seal of the 1st Dynasty and a stela of the same date (Kromer 1978, fig. 11.1-2).

Examples from museums of this type include: M6773, M6774, and UC 16216 all from 1st Dynasty Abydos (**map 4**), and some with handles more hooked than others and Reading 1946.166.1 from 1st Dynasty Tarkhan.

The usual fine quality of the knapping, the fact that this type in particular is often oversize, ritually broken or found as one of a pair (**Volume 1, 5.2.4.5**), suggests that these had some ritual significance.

9.1.3 Early Dynastic-Old Kingdom

With the disappearance of the curved back, the hook-shaped handle decays to a straight handle and the type becomes generally smaller. Most Early Dynastic examples have a rounded tip whereas the Old Kingdom examples tend to be pointed (Caton-Thompson and Gardner 1934, 125). Such examples appear in the iconography of the tomb paintings for example the tomb of Ptahhotep at Saqqara (**map 4**) of the 5th Dynasty shows straight backed knives with a pointed tip and small handle.

Some of these knives are particularly small and roughly worked. It is noticeable that they are not from royal tombs. Since the dating of these is often imprecise many may be of the same date as the fine examples mentioned above. Thus, the oft stated decline of flint work from the 1st–4th Dynasty may actually be rather a change from knives found in royal tombs to those found in non-royal tombs, rather than a general decline in quality. Unfortunately, most 3rd-4th Dynasty royal tombs were looted so it is difficult to compare later with earlier royal grave goods. Certainly not all later examples were roughly made (e.g. Kaiser *et al.* 1997, 140, pl. 18b; Dreyer *et al*. 1986, 87, pl. 45.352, etc. discussed below both from temple or near temple sites).

Straight back, straight handle (Type-5)

Plates 36 and 39.

In form, type-5 is a continuum of type-4 and continues into the 4th or 5th Dynasty. Gradually the handle straightens, the curved back becomes less pronounced and the tip becomes more pointed. By the end of the 2nd Dynasty (Petrie 1902b, 8) the back is almost straight. Some of these types are very flat on one side, e.g. M5901. Type-5 is generally less well made than types 2 or 4.

Several examples were found at 1st– 4th Dynasty Giza (**map 4**; Kromer 1978, 26–30, pls. 1–4). One example also came up from the 1988–1989 excavations at Giza made from tabular flint (Conard 2000, 25, 31, fig. 6.1) and about 15cm long. This example is flat on one side. Some of these have a slight downturn of the end of the handle seeming to hark back to earlier forms, though the tips are pointed. A 2nd Dynasty example from the tomb of Khasekemwy at Abydos (**map 4**) in the British Museum (BM EA68775; Petrie 1902, pl. 15; Spencer 1980, 94 no 680 and pl. 75) has a more rounded tip. Amélineau (1904, pl. 3) illustrates three examples from Early Dynastic Abydos and Petrie (1903b, 38, pl. 15) describes and illustrates several examples from the 1st Dynasty temple at Abydos. A 3rd Dynasty form from tomb K1 at Bet Khallaf (**map 6**; Garstang and Sethe 1902, 18, pl. 15) has an almost concave back but is otherwise more like the type-5. Examples were found at Kom IV in the Fayum (**maps 1, 3, 4 and 5**) dated by the excavator to the 3rd–4th Dynasty (Caton-Thompson and Gardner 1934, 125, pl. 79. 5–9, 17–21; 55 16–17). Caton-Thompson (*idem* 1934, 125) gives the average length of this type as 6½ inches and the width as 0.3 or 0.4 inches. These have more pointed tips. Two examples from a hoard from a 4th Dynasty house at Elephantine (**map 8**; Kaiser *et al.* 1997, 140, pl. 18b) are finely

worked. Another late example comes from 5th Dynasty Elephantine (Dreyer 1986, 87 pl. 45.353).

Cut-out handle, convex back (Type-6)

Plates 36 and 39.

This type has a convex back, or almost straight back and cut out handle. The tip is pointed. It is often difficult to distinguish between the straight backed and convex backed type, e.g. the 2nd Dynasty example from the tomb of Khasekemwy (Beck and Cleyet-Merle 1982, 105). Both Type-4 and 6 tend to be well made. BM EA68959 is an example of a finely made type-6. Caton-Thompson and Gardner (1934, 126, pl. 79.12) describe a type-6 knife which appears to have been polished prior to final flaking.

Reisner (1931, 230, pl. 18) illustrates the type dating from the late 4th Dynasty and another 4th Dynasty example is known from Naqada (**map 6**; M1009, **plate 38**). From Elephantine (**map 8**) 5th Dynasty context comes a knife found with the type-4 example mentioned above (Dreyer *et al*. 1986, 87, pl. 45. 352). These both come from the same archaeological context. 5th–6th Dynasty examples come from Abusir (**map 4**; Svoboda 1993, figs. 21, 23). A 6th Dynasty example is known from Dendera (**map 6**; Petrie 1900b, 10, pl. 20.30).

Little or no handle, convex back (Type-7)

Plate 39.

This has little or no handle and a convex back. The tip is pointed. Caton-Thompson (Caton-Thompson and Gardner 1934, 126) gives the average length as 6.8 inches long by 2.5 inches wide. There is a continuum between handled and non-handled types.

1st Dynasty Abydos (**map 4**) has an example of a knife with no handle (Petrie 1902, 16, pl.17.28). Other types have ill-formed handles (Caton-Thompson and Gardner 1934, 125, pls. 54.6; 50.18, 79.1–4). Several examples of this type come from Old Kingdom Giza (**map 4**; Reisner 1931, 230, pl. 18) and Old Kingdom Tell Ibrahim Awad (**map 4**; Schmidt 1992, 86, fig. 10). An example from Early Dynastic to Old Kingdom Tarkhan (Reading 1946.178; Petrie 1914, 11, pl. 7.5) is flat on one side. Reisner (1931, 230 pl. 18) illustrates the type dating from the late 4th Dynasty. The type continues into the First Intermediate Period, (e.g. from el-Ashmunein, **maps 3 and 5**, Spencer 1993, 60, pl. 96 nos. 302 and 303) and into the Middle Kingdom (see Middle Kingdom Type-1 and 3).

Leaf shaped (Type-8)

Plates 36 and 39.

This is possibly a variant of Type-7 but is more leaf shaped. An example is known from Koptos (**map 6**), now in Manchester Museum (M3555) which dates from the 1st-3rd Dynasty. Similar examples are illustrated in Caton-Thompson (Caton-Thompson and Gardner 1934, pl. 79 11, 13–14) dated by the excavator to the 3rd or 4th Dynasty. An example is illustrated from Old Kingdom ‘Ayn el-Gazzareen (**map 3**; Kobuseiwicz 2003, fig. II.4b). At Giza this type is dated to the 4th Dynasty (Reisner 1931, 230 pl. 18d). A particularly wide bladed type is known from Early Dynastic/Old Kingdom Tell Ibrahim Awad (**map 4**; Schmidt 1992, 86, fig. 9.52). The type continues until the Middle Kingdom (Garstang 1907, 106, fig. 96).

Types-9 and 10

Plate 40.

Both these types have particularly wide (deep) blades and straight or hooked handles. Type 9 in this typology has a straight or concave back and type-10 a convex back. Pawlik (2005) also publishes a particularly wide bladed form with a handle and convex or concave back. He also divides these wide types into two separate types on the basis of the shape of the back and both of his forms have hook shaped handles. The type is unusual.

Anomalies?

Plate 37.

Some examples are unusual and ill-formed (e.g. M5383A and M3572). They may be overknapped examples of other forms.

9.1.4 First Intermediate Period-Middle Kingdom Knives

Plates 41-45.

A large number of bifacial knives were found at Lahun (**maps 4 and 5**; Petrie 1890, pl. 46; Spurrell 1892, 52-53; **Appendix 2**) and others at Qasr el-Sagh (**maps 1, 4 and 5**) dating to the Middle Kingdom (Ginter *et al.* 1980, 140, 166–167, fig. 26.9, fig. 31.10–11). Many knives (e.g. L56.20.56, L56.20.60) from Lahun are flat on one side. This suggests a lack of turning at least in the later stages of manufacture. One would imagine that such knives would likely have been made on a flake or tabular flint rather than a nodular flint core.

While, most, though not all, Old Kingdom knives have a distinct handle, those of the Middle Kingdom rarely do (Hikade 1999, 49). There is evidence however, that handles were made from plant material wrapped around one end (see below)
4 types may be distinguished:

No handle, straight back (Type-1)

Plate 42.

Type-1 is possibly a continuation from Early Dynastic–Old Kingdom Type-7. This is the most common First Intermediate Period–Middle Kingdom type. It is without shaped handles, has a straight back and is pointed at both ends (Spurrell 1891, 52, pl. 8.7, pl. 13.6 and pl. 7.8; Petrie 1890, pl.16). Some of these examples can be very finely made and have no traces of resharpening. Length varies from around 10–20 cm. Examples may be longitudinally asymmetrical to a greater or lesser degree. Although they are without shaped handles, they may have cord wrapped around one end (e.g. Spurrell 1891, pl. 13.6 from a house at Lahun; **maps 4 and 5**). Where this occurs it seems the narrower end is the handle.

Published examples include that from a grave at Harageh (**map 4**; Engelbach and Gunn 1923, 11, pl. 7. 8) originally regarded as 12th Dynasty, though Lilyquist (1979, 137–138) suggests the site may date up to the 17th Dynasty. There are also a number from Tell el-Dabʿa (Tillmann 1992, 194–203, figs. 71–74). Examples from collections in British museums include: M239, M239b, M239c, and M250 from Lahun; Ashmolean 1896-1908, E1957 from the tomb of Antef Aqer II at Dendera (**map 6**) is Middle Kingdom or 2nd Intermediate Period. Ashmolean 1896-1908 E2284 from grave 6 at Beni Hassan (Garstang 1907, fig. 96) is probably 1st Intermediate Period–Middle Kingdom.

Iconographic depictions of knives with binding are apparent. However, these are of a slightly different shape being more s-shaped e.g. on Middle Kingdom apotropaic wands (Robins 1997, fig. 123). See also tomb 2 Beni Hasan (**map 5**; Griffith 1896, 35 pl. 8), which illustrates both the straight-backed form and the more s-shaped back. I know of no s-shaped archaeological examples and those with binding as far as I know, are straight backed.

No handle, hollow back (Type-2)

Plate 42.

This type has a hollow back and no handle and may be symmetrical or asymmetrical. The type is generally more coarsely flaked than First Intermediate–Middle Kingdom Type-1 and perhaps represents an over-sharpened version of Type-1. However, the similarity in length between Type-1 and 2 suggests that this might not be the explanation. Examples include BM EA67620 (Spurrell 1891, pl. 7.11) and Petrie (Petrie *et al*. 1890, pl. 16), both from Lahun (**maps 4 and 5**), an example from el-Ahmar (**maps 2, 6 and 8**) settlement site (Pawlik 2005, 200, 202, fig. 17). Further examples from British museums include: M153C, M240, M241, M250vi from Lahun and M4242 from Rifeh.

Handle, straight or convex back (Type-3)

Plate 44.

Type-3 has a handle and a straight or slightly convex back (for example Petrie 1892, pl. 7.16). Type-1 and 3 are something of a continuum in that some types have a very ill defined handle. For example, the knives from Tell el-Dabʿa illustrated by Tillmann (1992, pl. 68 and 69; **plate 44**), Lahun M38214 (**plate 44**) and an example from Beni Hasan (**map 5**) illustrated in Garstang (1907, 106, fig. 96).

Flint knives found associated with graves at First Intermediate Period el-Ashmunein (**maps 3 and 5**; Spencer 1993, 60–61, pl.94.302–303, pl.96.302–312) have slightly rounded backs with point and a short handle. One seems to have been ground on both sides. Their length is about 13cm. An example with a straight back in a British museum is UC7568i (this type is very similar to the Early Dynastic – Old Kingdom Type-1 and continues into the New Kingdom).

Leaf shaped (Type-4)

The leaf shaped type begins in the Old Kingdom (see above, Type-8). A Middle Kingdom example from Beni Hassan is illustrated in Garstang (1907, 106, fig. 96).

Anomalies?

Plate 45.

There are also unusual types such as M3823, M259ii, UC7565, etc. These are generally not so roughly knapped as to suggest cut down knives, though it is possible that some are.

Spencer (1993, 60, 61, pl.96.314–316) defines 3 roughly shaped small knives from el-Ashmunein (**maps 3 and 5**; as 'models.' They are possibly the most ill-formed knives published.

9.1.6 New Kingdom and later

Plates 45–47.

Very few New Kingdom flint bifacial knives have been found, except at Memphis. There are, for example, none from Amarna (**maps 3 and 5**) and none are illustrated in Tillmann's (1992) publication of material from Qantir (**maps 3 and 4**). Memphis seems to be an anomaly in that knives are known from the site, unless the apparent scarcity reflects the lack of extensive excavations of New Kingdom domestic sites, rather than reality.

Ikram (1995, 67) states that most New Kingdom knives are smaller than earlier examples and are straight backed and pointed at the ends. I would agree that they are straight backed but not that they are smaller (**Volume 1, 3.3.4.4** shows little difference in size). Moreover, examples I have seen tend to have rounded ends.

Miller has found flint knives in the Akhenaten Temple complex of East Karnak (**map 7**; Miller 1985, 233, fig.2; Tillmann 1992, fig.77; **plate 46.2**). The illustrated example is similar to my First Intermediate–Middle Kingdom Type-1, and, being 173mm long, is within the size range for earlier knives. It is straight backed and lacks a handle but has rounded ends unlike the pointed ends of the Middle Kingdom examples. A 19th Dynasty flint knife found in the Ramesseum at Thebes (**map 7**), now in the Pitt Rivers Museum (PR1896.53.2.1–2; **plate 47**), is of the same shape and is 126mm long. Miller also suggested that a hafted flake belonging to the Saite Period may be a late occurrence of a butchery knife (I have found no good description of this piece).

There is at least one example with a handle (Memphis number 1927 in Giddy 1999, 238 pl. 52, 1927; **plate 46.1**), dating to the early mid-18th Dynasty. It is straight backed. Although it is incomplete, one could deduce from the remaining fragment that its original size would have been comparable with Old and Middle Kingdom examples.

Other knives are found at Memphis but are not illustrated in the publication. As this is a recent excavation it is possible to compare numbers of knives from different levels. There are 32 knife fragments in all (out of a total 558 retouched flint which equates to 1/17). Knife fragments include: no.10031 from the early mid 18th Dynasty; no.1065 and no.1892 from the mid-late Eighteenth Dynasty; nos.131, 346 and 665 from the Ramesside level; nos. 378 and 1158 from the Third Intermediate Period level (Giddy 1999, 226–243). Since the publication does not state where measurements were taken it is difficult to deduce original size. At Memphis level I, the Third Intermediate Period level, there were 12 retouched flints in all of which 2 were knife fragments (1/6). In level II and IIb, of the Ramesside Period, there were 97 retouched flints in all of which 10 were knife fragments (1/9.7). In level III, of the mid-later 18th Dynasty, there were 160 retouched flints in all of which 3 were knife fragments (1/53). In level IV, of the early-mid 18th Dynasty, there were 98 retouched flints in all, of which 3 were knife fragments (1/32). In level V, of the pre-18th Dynasty, there were 112 retouched flints in all, of which 4 were knife fragments (1/28). Finally there were 19 retouched flints and no knife fragments in level V–VI (the report does not date level VI). The rest were in unstratified levels.

From this it seems there are reasonably high percentages of knife fragments in the pre and early to mid-18th Dynasty levels. There is a drop in the mid–late 18th Dynasty. However, from the Ramesside period onwards there is a greater percentage of knife fragments than ever before. Of course, with the small number of flints involved, this may not be statistically significant.

A Third Intermediate Period knife from el-Ashmunein (**maps 3 and 5**) town house (Spencer 1993, 31, 33, pl. 27, pl. 29, **plate 46.1**) measures 132mm long, has a short handle and has traces of cortex on one side. It is straight backed and pointed.

Petrie (Petrie *et al*. 1889, 58, pl.18) describes and illustrates flint knives from Hawara which he attributes to the 18th or 19th Dynasties. However, dating of contexts could be criticised. The method of measuring depth of soil in which the artefacts were found can at best only give a relative date. Other knives were found in a hollow which had been refilled at an unspecified date. In addition, one of the illustrated examples is a double endscraper of the type usually associated with the Early Dynastic Period.

9.2 Psš-kf

9.2.1 Morphology and dating

Plate 51.

There has been much discussion of this implement by Egyptologists, partly due to its role in the "opening of the mouth" ceremony. For discussions and further references see Roth (1992), van Walsem (1978) and Hikade (2003).

The morphological definition of the *psš-kf* knife depends on where one draws the line between these Dynastic items and the fishtailed knives of Predynastic periods. It is generally believed that the *psš-kf*, literally 'split knife' (*WB* I, 553, 6–10) or 'split flint' derives from the predynastic fishtail knife, and 'forked knife', 'fishtail knife' and '*psš-kf*' are terms often used interchangeably, though Hikade (2003) argues that the association is more presumed than real. Nevertheless, some instruments suggest a cross-over. Petrie (1903b, 38 pl. 41.33) illustrates an example which he describes: 'the size and form is that of the lance, yet it would not cut, and it is so late (7th–11th) Dynasty that it must be regarded as an amulet [i.e. as *psš-kf*]. This object is also cited in Gilbert (2004, 194).

Generally, however, the Dynastic *psš-kf* may be described as follows: The *psš-kf* is a polished bifacial tool with squared off handle and bifurcated blade. It usually measures between 10 and 20cm in length. Most examples are polished, though some unpolished forms occur (van Walsem 1978, 227–228 and fig. 1. 1, 8, 22). The *psš-kf* proper is not usually found in isolation but in a set of instruments. In tombs these objects were placed in a limestone slab with recesses cut therein to hold the objects. Not all *psš-kf* are of flint, despite the fact that the *kf* part of the name is believed to mean 'flint.' In fact, the flint *psš-kf* is rare after the 1st Dynasty, and van Walsem (1978, 231) records only one example after the sixth Dynasty. Other examples are of limestone or alabaster.

Van Walsem includes the 1st Dynasty example found at Abydos (**map 4**) in this type (BM EA37279, Petrie Abydos I, pl. 51, 22). Hikade (2003, 139) does not include this as a *psš-kf*. He states that these earlier examples are different from true *psš-kf* in that they have a pointed rather than straight handle. However, the Abydos example has a rounded rather than straight or pointed end. It may thus be an early example. Hikade (2003, 137) dates the earliest true *psš-kf* to the 4th Dynasty from the

Mycerinus temple (Reisner 1931, 61f, pls. 65a, b), though late examples occur in the Middle Kingdom (van Walsem 1978)[9].

Early Dynastic amuletic flint *psš-kf* are also known (e.g. BM EA37279; Petrie 1902b, 24 and pl. 51, 22; Spencer 1980, 101 (755), pl. 79; Roth 1992, 136-138). Later amuletic *psš-kf* are known in other materials (Roth 1992) some of which appear anthropormophised and a few have female heads. Such anthropomorphised amulets are usually found in women's graves (van Walsem 1978, 236-7).

While we are here concerned with the Dynastic *psš-kf,* the common assumption that these are derived from earlier bifurcated knives, the Predynastic fishtailed knives, means that I here briefly discuss these. The fishtail knife is a bifacial tool which, like the Early Dynastic ripple knife may be differently treated front and back with one side only being polished (Massoulard 1936). Hafted examples are known and elsewhere retouch ceases at the point where the stone would have been covered by the handle (Roth 1992, 128). Often all the exposed edges are evenly serrated while others are serrated only on the interior forked edge. Later examples tend to be smooth. Some examples are clearly not for everyday use. For example the fishtail knife with an ornate gold handle in Cairo Museum (Currelly 1913, 272, pl. 47). While some examples show wear suggesting heavy use, others were clearly broken for the grave (Hester 1976, 348–349).

Differences between the fishtailed knife and *psš-kf* draw into question the supposed similarity in function. Fishtailed knives tend to be associated with male graves, which seems at odds with Roth's (1992, 114) interpretation that these items were associated with birth and hence rebirth and specifically, were derived from blades used to cut the umbilical cord of the newborn (Hikade 2003). The later *psš-kf* was, according to text, clearly associated with the bringing to life of various entities. However, as male deities are life creating in Egyptian mythology, the appearance of such instruments in male graves is not problematic.

9.2.2 Function

That *psš-kf* were used in the "opening of the mouth" ceremony is clear from their listing among other implements used for such purposes in the Abusir Papyrus (Posener-Kriéger 1968) and the inclusion of these in the sets of implements clearly matching textual descriptions of the implements in the ceremony (for textual

[9] Van Walsem 2978, 231 mentions a 26th Dynasty example of which little is known. This may be a model.

references see Otto 1960 and van Walsem 1978). In literary sources, the *psš-kf* occurs earliest in the *Pyramid Texts 30a, 37.*

The reasons why this knife became so important in the ceremony are discussed by Roth (1992) who favours a use partly predicated upon the use of its predecessor, the Predynastic bifurcated knife. However, as Hikade (2003) has demonstrated, the two are unlikely to be connected and the meaning behind the *psš-kf* must remain a mystery. All that can be said is that the literature states that the purpose of the "opening of the mouth" ceremony is to 'make firm the jaw' of the deceased (*Pyramid Text* 37).

9.3 Large bifacial points

9.3.1 Spears/javelines/pikes

Plates 52–55.

Miller *et al*. (1986, 189) states 'Attempts to distinguish, solely on the basis of arbitrary size and weight limits, between 'arrowheads' and points assumed to be 'javelin' or miniature 'spearheads' found in the same assemblage should be avoided, in the absence of supporting evidence'. However, it is generally agreed that the smallest examples are usually arrowheads.

Points I here define as bifacial pieces with bilateral symmetry and narrow form, suggesting a point rather than a wide blade. Spears, javelins and pikes are larger points (larger than 9cm long). Arrowheads, which are shorter points are treated separately below.

Vila (1970) deals with the possible way in which large points may have been used. He (1971, 196) states that the use of flint pikes, javelins and lances would be suited to rapid initial attack, as under prolonged use such items would not preserve their penetrating qualities as long as metal.

One may question why there appear to be so few flint spears and lances, or indeed arrowheads before the Second Intermediate Period. There are in fact few weapons of any kind until this date, whether of metal or stone (Tillmann 1992, 208). Those that are known are from tombs so it could be argued that these are not the everyday types. See **Volume 1, 5.3** for the possibility that metal forms were preferred for tombs because of their shiny nature). However, there are some metal spearheads. The earliest known iron spearhead comes from Buhen (**map 9**).

I first describe specimens which I feel unhappy about accepting as weapons, but which others have identified as such. Knives and projectiles tend to be confused. Kromer (1978, 33–34, fig.7–8), publishes points from Giza (**map 4**) which he too

suggests could alternatively be knife tips. These date to 1st–4th Dynasty. A New Kingdom bifacial tool described as a spear is published from el-Ashmunein (**maps 3 and 5**; Roeder 1931–32, 108, fig.3; Larsen 1935, 79). As it is incomplete, it could be part of a slightly odd-shaped knife. Larsen (1935, 79, fig.18 nos. 1–7) mentions possible spear-tips from Abu Ghâlib (**map 4**), though points out that these may also be parts of knives. The dating of Abu Ghâlib is disputable though it is generally considered Middle Kingdom (see Kemp 1989, 161–166 and Bagh 2002, 42 for dating of this site). Petschel *et al.* (2004, 118.111) published two 'Speerspitzen' from Lahun (**maps 4 and 5**) in the Liverpool City Museum collection (56.20.58 and 56.20.54). Having seen them, it is my opinion that the pieces are slightly asymmetrical and are thus are probably knife-tips. In a number of other publications there are also items neither described in detail nor illustrated but instead published in such terms as 'a finely made knife'. In the light of confusion between knives and projectile points, these items could be projectiles.

A rough blade was found at Qantir (**maps 3 and 4**) which Tillmann (1992, 93, pl.23.1) classed as a preform of a 'Lanzenspitzen.' This measures 100mm long. Tillmann (1992, 93, pl. 23.2–3) identifies 2 other 'Lanzenspitzen' fragments from the same site. These seem to have been found in the same area as the arrowheads, which reinforces a possible use as weapons. The illustrations suggest they may be spearheads but the identification must remain uncertain as these are fragments only.

I now describe pieces which I believe are clearly spears or lances. The largest collection of spearheads and lances comes from the Early New Kingdom site of Mirgissa (**maps 2 and 6**) and was published by Vila (1970; **plates 52–53**). He defined 310 'javelots' and 'javelines' and 88 spears. While this fort is in Nubia the items are clearly Egyptian (Graves-Brown in press)

As well as those published by Vila in 1970, additional javelin-heads were found at Mirgissa away from the main armoury (Dunham and Janssen 1967, pl. 92 B and C). The illustrations show spear or javelin-heads. Spear and arrowheads were also found at Buhen (**map 9**), in conjunction with late Middle Kingdom-Early New Kingdom pottery (Emery *et al.* 1979, 48). These include: Birmingham Museum 513.1965 (Emery *et al.* 1979, pl. 102.K; **plate 54**); DUROM 1964.105 (Emery *et al.* 1979, pl. 102.E.); BM EA65771 (Emery *et al*. 1979, 116 no. 271 or 272 [the British Museum labels these as Middle Kingdom though in the report they are said to be from the New Kingdom painted Hall of the Commandant's Palace–Emery *et al*. 1979, 104)]. Vila (1970), reports other similar material from this site then residing in Khartoum

Museum. He cites comparable pieces from Semna and Uronarti (**map 9**) (Vila 1970, 193; Dunham and Janssen 1967, pl. 45a) also in Khartoum Museum. Again, the illustrations in the Dunham volume confirm his identification. At least one lance-head was found at Askut (**map 9**) dating to the early New Kingdom (Smith 2003, fig. 5.8 and **plate 55**).

Other than military sites, two 18th Dynasty 'probably spear-heads' were found at Kôm Rabîʿa, Memphis (**maps 3 and 4**; Giddy 1999, 227, 233 no. 951/69 and no. 1066, p227, 234). These are described as crude and bifacial, which could imply unfinished or heavily sharpened items (they are not illustrated). Another was found predating the 18th Dynasty (Giddy 1999, 233 no. 905/57).

The beautifully made flint arrowheads, from Mirgissa, would have been eminently suitable for warfare. However, it is possible that these items were also manufactured for display perhaps as parade or status items (Section 5.3.1).

9.4 Arrowheads

Plates 56 and 57.

Arrowheads are points of less than 9cm long.

Dynastic arrowheads are not only made from flint but also wood, rock crystal, ivory and metal. Some flint types are bifacial while others are transverse. The most complete study of arrowheads from Dynastic Egypt to date is that of Clark *et al.* (1974), though more recently Hikade (2001) has produced a new typology incorporating the Sudan. Spencer (1980) also examines Early Dynastic forms in the British Museum. That some bone tipped Egyptian arrowheads were poisoned was demonstrated by Clark *et al*. (1974, 342–345), though there is no evidence for Egyptian stone tipped poisoned arrows.

The form of the arrow is used as a hieroglyph in ancient Egypt, for example in the word *swnw* 'physician'. It also appears as the symbol for the goddess Neith and the god Min. The bifacial flint, ivory or metal arrow is depicted, as opposed to the transverse stone form.

As stated above, there are few weapons known whether of metal or stone, before the Second Intermediate Period, so it is not clear if many of the arrows found are hunting or war weapons, though the quantities of arrowheads found in the fort of Mirgissa (**maps 2 and 6**; Vila 1970) are likely to be weapons of war. Arrowheads, particularly the bifacial forms and those of rock crystal may well have also functioned as non-utilitarian items. It is particularly noticeable that in the Early Dynastic Period

there are concentrations of bifacial arrowheads and arrowheads of rock crystal (as well as ivory) in the royal burials at Abydos (**map 4**). Gilbert (2004, 55) states 'the regional cemeteries of this period tend to have fewer arrowheads often constructed of less valuable materials.'

Bifacial (heavier) arrows with their greater penetration possibilities would have been more suitable for large prey including humans, though depictions on Predynastic slate palettes (Clark *et al*. 1974, 323) and the large quantities of transverse tipped arrowheads found at the Middle Kingdom fort of Mirgissa (Vila 1970) suggests that transverse arrowheads were also used in warfare.

9.4.1 Early Dynastic

Plate 56.

Early Dynastic stone arrowheads (arrowheads are frequently made of ivory or bone and later of metal) can be flint or rock crystal. Many of the bifacial arrowheads of the Early Dynastic come from elite graves. The use of rock crystal, an exotic stone, plus the manufacture of items which would take some time to manufacture at a time of state formation suggests that these items were more than utilitarian, perhaps prestige items.

A group of large arrowheads or lance-heads in flint and crystal was found in the cenotaph of Horus Djer of the 1st Dynasty (Hayes 1953, 46) and is now in the Metropolitan Museum of Art. Hayes does not state what form these take.

'Klassiche Abydos-Spitz'

Bifacial rock crystal and simple flint tanged arrowheads come from 1st Dynasty Abydos (**map 4**; Petrie 1901, pl. 4, no. 14, pl. 6, nos. 6–7, 9-12; Spencer 1980, 100 nos. 743-748, pl. 79; Beck *et al*. 1982, 105). 6 quartz arrowheads come from the tomb of Djer (accession number BM EA68755; published in Petrie 1901a, pl.6.5,9,10; cited in Gilbert 2004, 190). Another from Abydos, again in rock crystal, is published in Currelly 1913, pl. 29, 63886, cited in Gilbert 2004, 190). 9 flint examples are known from the tomb of Aha, B18 (BM EA68750–2, UC35618a–d, Berlin 15473 published in Petrie 1901a, pl. 4.14, cited in Gilbert 2004, 189). 4 flint examples are known from the tomb of Djer (BM EA68757–8, published in Petrie 1901a, pl. 6.11, 12, 16, cited in Gilbert 2004, 189 and PR1901.40.21; **plate 56**). A number of others are listed by Gilbert (2004, 189). These are long, thin and tanged and have rounded longitudinal edges. Hikade (2001, 121) christens this type the 'klassiche Abydos-Spitz'. Gilbert (2004, 51) classifies them as type-1d and states that some have fine serrations (though those I have seen with serrations are late Predynastic). The rounding

is unlikely to be due to wear. Towner and Warburton (1990), cited in Tillmann (1992, 214) show rejuvenation of arrowheads. The pattern described does include rounding but more noticeably a shortening in the length of the arrowhead. Arrows from the Early Dynastic graves are not shortened. Moreover, the knapping of the Early Dynastic examples is so regular that it is unlikely to be rejuvenation. This type is also apparent in the late Predynastic (e.g. UC35681 from Abydos).

3 arrowheads of the same shape were found from the cemetery at Zawaïda. However, these were polished (Beck and Cleyet-Merle 1982, 147). Unfortunately the report does not specify the date. I have assumed them Early Dynastic on typological grounds.

Double Arrowheads

Gilbert (2004, 52) states that all flint double arrowhead types belong to the 1st Dynasty[10]. This is Hikade's (2001, 122) 'querschneidige Abydos-Spitze'. All known examples are from Abydos (**map 4**; e.g. Petrie and Griffith 1901, pl. 6.13 and 14; from the tomb of Djer; Currelly 1913, pl. 29.63888; Berlin accession number 18088 published in Amélineau 1904, pl. 17.81 and Scharff 1931 98, pl. 9.196: **plate 56**). There are fewer examples of the double type than the simple tanged examples listed above. At least one example is probably of rock crystal (the example is broken thus we cannot be certain of the type, but the base appears to be of a double arrowhead). This is one of the five in Berlin Museum whose history is lost (Berlin 14205, Scharff 1931, 97, pl. 9.192).

Transverse Arrowheads

While the above are bifacial, transverse arrowheads are also known for the Early Dynastic. Ivory, fish jaw and agate tipped arrowheads were found in 1st Dynasty Tomb of Hemaka (Emery and Saad 1938, 45–48). The agate tips were lunate in form. The variation may reflect the fact that they were made by different people (Clarke 1977) or for different uses (Emery and Saad 1938, 47).

Finally, three triangular transverse arrowheads of the late Predynastic-early Dynastic are known from Abusir el-Meleq (**maps 4 and 5**; Scharff 1926, pl. 30. 283, 48) and measure between 14 and 15mm in length and 12-14mm in width.

[10] Examples have also been found in the Fayum which are usually said to be Neolithic, though as these are unstratified the dating must remain uncertain (Hikade 2001, footnote 107).

9.4.2 Old Kingdom

4 arrowheads were found on the surface of ʿAyn-Asīl (**map 3**) a late Old Kingdom to First Intermediate site (Midant-Reynes 1998, 47 footnote 81, 62, photo 15a). However, their dating is uncertain due to the unstratified nature of these deposits. The illustrated example is bifacial and tanged, broad and triangular with straight edges to the body

At Old Kingdom Saqqara (**map 4**) transverse points were found still intact in shafts (e.g. Emery 1961, 113). Wall paintings and palette reliefs show the use of transverse points in arrow shafts (Clark *et al*. 1974; Emery 1961, 113, fig.70).

3 arrowheads were found at Old Kingdom Elephantine (**map 8**; Hikade 2002, 310) though these are not illustrated.

9.4.3 Middle Kingdom

Middle Kingdom iconographic depictions of arrowheads appear to show transverse forms (e.g. in the Middle Kingdom tomb of Senebi at Meir) and tanged and pointed forms (the latter being the same form as earlier bifacial types). Archaeological examples are known in wood, metal and stone (McDermott 2004, 66-67). Only the metal forms are tanged and pointed.

Garstang (1907, 160, fig.162) appears to describe transverse tipped arrowheads from Beni Hasan (**map 5**) tomb of Sebek-hetep 'The arrows were commonly tipped…with a tiny piece of sharp flint. In one instance…the point was also provided with a sort of barb, though this may have been merely a decorative feature, as a barb of this shape would hardly be effective.'

Tipped and barbed arrowheads are also known from the early 12th Dynasty tomb of Ankhef (seen by the author in the British Museum 11.2009; EA 47570). As these were hafted it was difficult to tell if tips were geometric or lunate. The barbs appeared triangular.

A Middle Kingdom triangular tranchet arrowhead is illustrated in Scharff (1926, 48, fig. 19) but no provenance is given. Hayes (1953, 280 fig. 182) illustrates Middle Kingdom arrows from graves at Lisht (**maps 5 and 6**) and Gebelein (in the Metropolitan Museum) which have chisel edged flint flakes cemented into ends and on one arrowhead there are several lateral flint barbs behind the chisel edge. Similar Middle Kingdom arrowheads can be seen in the British Museum (McDermott 2004, figs. 42, 45).

Hikade (2001, 114) describes the microlithic lunates or square ended arrowheads of model soldiers in the 11th Dynasty grave of Meseheti in Assiut (**maps 3**

and 4; see Saleh and Sourouzian 1987, no. 72). However, in my opinion, the illustration is not so clear as to deduce the type of arrowhead which might tip these weapons.

9.4.4 New Kingdom

Plate 57.

By the mid 18th Dynasty arrows with bronze tips were certainly in use, though even at this date metal tipped arrows were uncommon (Hayes 1959, 69).

2700 lunate and trapezoidal transverse arrowheads were found at the late Middle Kingdom-Early New Kingdom Egyptian fort of Mirgissa in Nubia (Vila 1970). Miller *et al.* (1986, 188) estimates that at this date the Egyptians could shoot 30 arrows every three minutes, which would explain the large numbers.

Transverse arrowheads comparable in date and form with the Mirgissa pieces come from the New Kingdom tombs of Tutankhamun (McLeod 1982, 24–25, 59), Mahirpir (Daressy 1902, 33–36, pl. 11), and Senenmut (Hayes 1959, 212), and from New Kingdom East Karnak (**map 7**; Miller 1985, 6, fig. 1.6). Transverse examples are also known later (see below).

The Senenmut examples appear to be of quartz and have chisel ends and lateral barbs. Those from the tomb of Tutankhamun appear to be blue glass (McLeod 1982, 24–25, 59), or perhaps blue agate (Gilbert 2004, 48). Given the quantity of blue glass found in other artefacts from this tomb and the fact that the nearest source of blue agate would appear to be South Africa, blue agate seems unlikely. While the material is different, the technology of knapping was the same as that for flint. The items from the tomb of Mahirpir, one might argue, are Nubian, since the occupier was a Nubian official. However, as Smith (1992; 2003, 22-23) has demonstrated, his gravegoods are purely Egyptian.

New Kingdom bifacial arrowheads are also known though often explained away as either Nubian or plunder from earlier graves. However, it is my belief that the Egyptians manufactured bifacial arrowheads until at least the 18th Dynasty, though they were not so common as transverse examples. I base my assumptions on the following.

A number of bifacial arrowheads are known from New Kingdom Delta sites. Five are known from ‘Ezbet Helmi, Tell el-Dabᶜa from 18th Dynasty contexts (Tillmann 1994, 108, 257; Bietak 1996, 11; **plate 57**). Tillmann and Bietak both considered these to be the products of Nubian mercenaries. A similar argument was

made for the pieces from 19th Dynasty Qantir (**maps 3 and 4**; Tillmann 1986; 1992, 91–92, fig. 24–25) found in what appeared to be an arms factory. There is also an arrowhead preform from the same site (Tillmann 1992, pl. 23.4). The idea of a Nubian origin for the Qantir material is tentatively supported by Hikade (2001, 123), at least until Nubian material can be accurately dated or further Ramesside material found in Egypt (Hikade 2001 makes no mention of the Tell el-Dabᶜa examples). Zibelius-Chen (1988, 14) however, doubts that the Qantir arrowheads are Nubian.

Arguments for a Nubian origin rest upon the following premises:

- The raw material looks like non-local flint
- Other Nubian material is known from the eastern Delta
- Textual evidence proves that arrows were imported from Nubia
- The Qantir arrowheads are typologically similar to Nubian pieces

The raw material may indeed be non-local flint, but this does not preclude the possibility of Egyptian flint being used. Flint may have been procured from a great many sites in Egypt. The actual sourcing of flint is difficult. Despite general lack of work on sourcing, at least one New Kingdom Egyptian flint mine is known (Harell 2006).

I certainly would not deny Nubian presence in the Delta as other Nubian material is indeed known from the region. Bourriau has used the presence of Nubian pottery as evidence for Nubian mercenaries (Bietak 1996, 12 footnote 18; Bourriau 1991). Textual evidence shows that arrowheads themselves were imported from Nubia as tribute (Zibelius-Chen 1988, 114). However, Nubian lithic material of this date does not look like the Delta pieces either in material or form.

Tillmann (1994, 108) and Bietak (Bietak 1996, 11) state that flint arrows from Tell el-Dabᶜa are similar to those from Soleb II and from el- Kurru (**map 9**). Bifacial Nubian arrowheads of the 18th Dynasty are indeed known from Soleb II (Giorgini 1971, 94, fig. 128), but these are quite unlike the Delta forms. With one exception, out of a group of eleven published pieces, Soleb II pieces are without a tang. Those from the Delta and, as I will show, from other Egyptian sites are tanged. Additionally, Nubian pieces are rarely flint but rather quartz or carnelian.

The el-Kurru connection is more convincing but still problematic. El-Kurru has tanged examples (Dunham 1950, 13, 15, 16, 17, 72, fig. 1c, fig. 2c, fig. 3b), as well as lunates (e.g. Dunham 1950 fig. 1C, 2C, 3B), the later being comparable to Mirgissa finds. The problems are those of date, size and raw materials. Dunham, following the

excavator, Reisner, dated the el-Kurru examples to c.860–840 BC, making them later than comparable Egyptian examples. However, the date is disputed. In 1982 Kendall (1982, 23–24, fig. 18) dated the context to the 12th to 10th centuries BC but later revised this (Kendall 1999 a and b), agreeing with Reisner on an early 9th century date. This was disputed by Török (1997, 88–92; 1999) who preferred a date of 1020–960 B.C., still too late to be contemporary with the Tell el-Dabʿa finds but perhaps comparable to Qantir. Additionally, the average length of the el-Kurru arrowheads is 4.5cm, somewhat longer than the Tell el-Dabʿa finds at 3.9cm and the Qantir pieces averaging 3.19cm (Tillmann 1992, 89). Additionally, the tang of the el-Kurru examples is much more pronounced. The slight variation in size and tang could be overlooked in view of the small number of pieces, and because dating is problematic. However, as stated above, the el-Kurru examples, as with Nubian lithics in general, are manufactured from carnelian, quartz etc., rarely flint. The Delta examples however, are flint. Thus, while the Delta examples could be Nubian, there are serious doubts surrounding this conclusion.

Other probable examples of Egyptian New Kingdom bifacial tanged arrowheads are extant. A group of bifacial arrows was found in the 18th Dynasty tomb D29 at Abydos (**map 4**; Ashmolean 1896=1908 E2703 and Pitt-Rivers 1900.42.9-10; **plate 57**). Believing that fine flint work of the New Kingdom was unlikely, the excavator suggested that these might have been taken from an Early Dynastic tomb (Randall-McIver and Mace 1902, 89). However, the form of Early Dynastic pieces is very different (**plate 56**). The barbs of those from the 18th Dynasty graves are more pronounced and the cutting edges straighter than those from the 1st–2nd Dynasty graves. One might argue that the Early Dynastic pieces were originally straight but rejuvenated. Towner and Warburton (1990) show similar rounding of arrowheads after rejuvenation though the Early Dynastic pieces are so regularly knapped that they do not, in my opinion, appear rejuvenated. Besides, the problem remains that the constructors of the 18th Dynasty tomb had somehow managed to find extremely rare unused versions from Early Dynastic tombs – possible but unlikely. The D29 examples most closely resemble the el-Kurru forms, though again are small at c.3cm average length. The D29 examples are also made from specially selected variously coloured, non-local flint. Nubian examples likewise are made from exotic stone, though as we have seen, rarely flint. The D29 examples are of course earlier than the el-Kurru examples.

Fragmentary New Kingdom bifacial arrowheads are also found at Kôm Rabîʿa, Memphis (**maps 3 and 4**; Giddy 1999 no. 1155, p. 227, 234). Their 'crude' form could be the result of rejuvenation. Bifacial arrows are also occasionally post New Kingdom in date (see below).

Ethnographic studies have shown that a wide range of arrowhead sizes and designs can arise among archers within the same region (Wiessner 1983; Miller *et al.*1986, 189–190). There could well a great diversity in Egyptian lithic arrowhead form because different forms would be particularly suited for particular uses and because archers exchange arrows (Miller *et al*. 1986, 189). The New Kingdom spread of armour as well as improvements in the bow may have afforded increased diversity. Armour penetration would require heavier arrowheads which would be made more efficient through use of the composite bow. The tranchet type may alternatively have been more suited to cutting into unprotected flesh, causing profusely bleeding wounds (Edmonds and Thomas 1987, 192–193).

Finally, one might ask, why, if flint was ubiquitous in Egypt and the technique of fine bifacial work still known, would the Egyptians really go to the trouble of importing flint rarely found in Nubia, from Nubia? Thus, I would question the assumption that the bifacial arrowheads found in Egypt in New Kingdom contexts are foreign or Early Dynastic.

9.4.5 Post New-Kingdom

It is usually agreed that the Egyptians used stone arrowheads until late (e.g. Forbes 1966 VII, 108; Tillmann 1999; Hikade 2001. However, how late is debateable. Herodotus, *Histories,* Book III part II writing around 430 B.C., states that the Ethiopians used arrows tipped with stone 'of the kind used in engraving seals' rather than iron. This suggests that by this date it was unusual for societies to use stone tipped arrowheads (he tends to mention the unusual). However, there is some evidence that the Egyptians at least occasionally used stone arrowheads.

Balfour (1897) and Hickman (1959) both describe 26th Dynasty arrows, now in the Pitt Rivers Museum (accession number 1896.2.1.16) as being chert tipped and as having a wide transverse cutting edge which is illustrated (a crescent shaped tip is shown in Balfour 1897, pl. 10). I was unable to examine this in the Pitt Rivers Museum but confidently assume from description and illustration that a tranchet type arrow is described. There are also similar dated examples from Theban tombs in

Ashmolean (illustrated in Clarke *et al.* 1974, 350, pls. 12-13) which have microlithic tips and separate barbs.

A bifacial flint arrowhead was found at Elephantine (**map 8**) dating to the 26th-27th Dynasty (Hikade 2001, 122). Hikade does not illustrate this but as he categorizes it as a Soleb point it must be hollow based.

Bifacial stone arrowheads and ivory points were also found at 21st-24th Dynasty Medinet Habu (Hölscher 1954, 6. pl. 3A). Here the stone points seem to imitate those of bone; they are long and thin without tangs or barbs.

9.5 Axes, adzes and hoes

Plates 58-64.

It is sometimes difficult to distinguish between adzes, axes and hoes. Adzes and hoes may be distinguished from axes by the form of hafting or through micro-wear analysis. Additionally, unlike axes, the cross-section of the adze and hoe is likely to be flatter on the underside than the upper. This flat side is more vital in the case of adzes where a flat surface would be desirable for smoothing wood surfaces. A flat surface is not so necessary for a hoe. Unfortunately, in a number of publications the cross-section is not drawn, therefore one cannot tell if the artefact is an axe, adze or hoe. For the purposes of this typology, where examples are cited from published sources and no cross-section is illustrated I have assumed that the categorisation given by the author is correct. In the case of the Type-2 axe however, I have classed them as axes whatever their cross-section, on the basis of their striking similarity to metal axes of the same date. The difference between hoes and adzes is discussed in more detail below.

Axes, adzes, and hoes may exhibit gloss. It is now commonly known that adzes, like axes may have gloss resulting from phytolith polish contact with plant material, in the case of axes and adzes, specifically of wood (Keeley 1983). However, use in the soil can also produce gloss (references in Odell 2004, 176).

9.5.1 Axes

Plates 58–60.

Edel (1986) describes the determinative for the word for axe, *mjnb-jt*. The axe determinative is used until the 5th Dynasty and is then replaced by the metal determinative. Though there are exceptions, including a Graeco-Roman example, the general trend might suggest that after the 5th Dynasty axes were generally made of metal. It does seem that most surviving axes are of metal. Of Davies' (1987) 300 examples of Dynastic axes, only 7 were of flint. Additionally, the extensive

typological study of axes by Kühnert-Eggebrecht (1969) largely concentrates on the much larger corpus of copper and copper alloy axes.

However, it is possible that there are more flint axes than previously recognised. Flint axes, along with stone axes, generally have been associated with the Prehistoric Period even if they appear in later contexts (Kopp 2005–6, 10). For example, Junker (1920, 152) describes an axe found in a Middle Kingdom tomb of Qubaniya-North "sicher aus der Frühzeit stammend und hierher übernommen". Kopp (2005–6, 10) postulates that stone axes are considered Nubian because of the numbers found in Nubian forts. Petrie (1920, 24) and Vila (1970, 193) also state that stone axes are commonly found in Nubia. However, as will be shown below they also appear in Egypt.

Utilitarian stone axes easily break so there seems little point spending much effort in shaping (Spurrell 1891, 51). Spurrell's examples appear to have been made using a soft hammer and while adequately formed could not be described as finely flaked. The polished examples, however, are finely made and presumably had non-utilitarian importance.

Axes may have been used as both weapons of war as well as tools for woodworking, etc. (Gilbert 2004, 66–68). Others, more finely made may well have had some ritual importance.

Early Dynastic-Old Kingdom

A large number of stone axes have been found in the lowest levels at Koptos (**map 6**), and thus would seem to be Predynastic or Early Dynastic (Petrie 1920, 24). There shape is not described or illustrated.

Type-1

Plates 58 and 60.

This type appears longer in length than Type-2. It is very similar to the Type-1 adze though does not have a flat 'bottom edge'. It is of a triangular shape with wide cutting point and a narrow butt.

One Early Old Kingdom bifacial axe was found at Tell Ibrahim Awad (**map 4**; Schmidt 1992, 88, fig. 11.57). Another bifacial example comes from 1st–4th Dynasty Giza (**map 4**; Kromer 1978, fig. 15.2). UC19755 from Old Kingdom Buhen (**map 9**) is almost triangular in shape, though made on a flake. It measures 80.2x68mm. It could be used as an adze or hoe but its similarity to other type-1 axes and lack of adze/hoe

wear suggests it may be an axe. 3 examples were found in house F at Elephantine (**map 8**; Kaiser *et al*. 1997, 140, pl. 18b) dating to the 4th Dynasty. 2 axes were deposited in the Berlin Museum. One from 5th Dynasty or later Abusir (**map 4**) is described and illustrated in Scharff (1931, 47, pl. 3.48, Berlin no. 19876). This example is 15.5cm long and 8cm wide. Another (Berlin Museum no. 16048), from Petrie's excavations at Abydos (**map 4**), is also illustrated in Scharff (1931, 47, pl. 3.47). This example dates to the 1st Dynasty and measures 14.4x7.3cm. It is possible that both of these examples are adzes as no cross-section is shown in the illustration.

This type apparently continues until the 12th Dynasty as an example was found at Lahun (**maps 4 and 5**; BM EA67735; **plate 58**).

Type-2

Plate 58.

Type-2 are smaller than Type-1 and appear more semi-circular in outline. The type seems to originate in the Neolithic (e.g. Berlin 12917 and 14408, Scharff 1931, 46, pl. 3.43 and pl.3.44).

4 Old Kingdom examples come from Giza (**map 4**; Kromer 1978, 34–35 pl. 9). These are made on flakes are almost semi-circular and very similar in overall shape to Early Dynastic-Old Kingdom metal flat axe forms (e.g. Hayes 1953, 46, fig.36). They measure from 35mm to 90mm long.

Other similar examples from Petrie's excavations at Abydos (**map 4**) date to the 1st and 2nd Dynasties. These include Berlin Museum nos. 16067, measuring 63x 62mm and 15554 measuring 67 x 60mm (Scharff 1931, 47, pl. 3.45; **plate 58**). The illustrations do not indicate if these are made on a flake or bifacially.

An example from Hierakonpolis (**maps 2, 6 and 8**) must be either late Predynastic or Early Dynastic (Ashmolean E1639, Adams 1974, 114) though this is described in Adams as an adze.

Tillmann (1992, 143-144, fig. 67) illustrates a possible axe ('Hacken') fragment from Middle Kingdom Tell el-Dabᶜa. This is made on a flake and is retouched around the edge. It is similar to the Old Kingdom examples from Giza (**map 4**) listed above as axes. Alternatively, it is perhaps a large scraper. It is similar to the 1st Dynasty scrapers from Saqqara (**map 4**; Spencer 1980, 99, 742 pls. 77, 78.79). It is possibly too thin for an axe.

Middle Kingdom

Type-3

Plate 59.

Many flint axes are Middle Kingdom in date. These are lugged, bifacial and bear a general resemblance to the metal axes of the same date (e.g. those illustrated in Davies 1987, 74–76). Several of this type and this date, are manufactured in other materials such as basalt (e.g. Spurrell 1891, pl. 7, 3). In certain contemporary and earlier illustrations, axes of this shape are coloured differently to other items made of metal (Spurrell 1891, 52).

Examples of this type include: a 12th–13th Dynasty example (Englebach and Gunn 1923, 12, pl. 7.11), now in the Petrie Museum (UC18643); another 12th–13th Dynasty example (Englebach and Gunn 1923, 12, pl. 7.9) now in Reading Museum (1946.172.1); BM EA 67596 from Lahun (**maps 4 and 5**; Davies 1987, 27); Cairo Museum no. 47273 (Tillmann 1992, 146); a 12th - 13th Dynasty example found at Tell el-Dabᶜa now in Cairo Museum (number TD-8305; Tillmann 1992, 145, fig. 66 no. 1; Tillmann 1994, 109 no. 40); M247 (Petrie 1890, pl. 16 small) from Middle Kingdom Lahun; UC16738 (Petrie 1890, pl. 16 large) and UC18643 from Middle Kingdom Lahun and Harageh (**map 4**). The latter has a slightly curved profile, perhaps suggesting use as an adze but this may simply be due to the curvature of the stone. This last item exhibits gloss. Berman (Berman *et al*. 1999, 183) describes and illustrates a 12th Dynasty axehead in the Cleveland Museum (accession number 1915.35) from Harageh made from tabular flint with lugs. Only one side is worked.

Type-4

Plate 59.

A further type is listed in Caton-Thompson (Caton-Thompson and Gardner 1934, 129, pl. 55.23). These two axes were found on the surface of the temple workshop of Qasr el-Sagh (**maps 1, 4 and 5**), a site now thought to be Middle Kingdom. These appeared to be made of locally available nodules and were roughly shaped as triangles with a narrow butt and wide cutting edge. The illustrated example is about 4 inches long. Large numbers were also found at the Umm-es-Sawan quarries in association with Old Kingdom pottery. It is possible that these should be classed as rough adzes or hoes.

9.5.1 Polished axes

Most polished axes are of stone other than flint (Petrie 1920, 24). They are triangular in shape with a narrow butt and wide cutting edge. Examples include: ʿAyn-Asīl late (**map 3**) Old Kingdom to First Intermediate Period (Midant-Reynes 1998, 36, 61 photo 13) made from basalt. An almost identical example comes from Predynastic Giza (**map 4**; Kromer 1978, 25 fig. 10), though the dating may be based on the assumption that these items are Prehistoric. What appears to be a broken Old Kingdom polished stone axe is illustrated from ʿAyn el-Gazzareen (**map 3**; Kobbuseiwicz 2003, fig. III, 9) where the type of stone is not given. Three Middle Kingdom examples are known from Mirgissa (Vila 1970, 187-188) which the excavator believed to be combat weapons. Vila (1970, 194 footnote 6) gives further examples.

Some later polished stone axes have obvious evidence of ceremonial importance. For example, a 19th Dynasty axe now in the Petrie Museum is inscribed with the name of the *wab*-priest Sekenu (Petrie 1917, 8, pl. 8; Kühnert-Eggebrecht 1969). BM EA67642 (Spurrell 1891, 52) is a basalt example from Middle Kingdom Lahun (**maps 4 and 5**). This example appears very blunt. Spurrell (1891, 52) suggests that this particular item could only have been used for hacking at soft stone blocks. However Petrie (1917, 8, pl. 8) describes similar blunt examples, including that of the *wab*-priest, as 'ceremonial'. Spurrell (1891, 52) also mentions a chalk axe from Lahun. There is of course an alternative explanation that, with the exception of that of the *wab*-priest, these items could be toys.

A possible flint axe includes a 3rd Dynasty example of a polished flint item from tomb at Giza (**map 4**; Petrie *et al*. 1907 pl. 111A). However the cylindrical shape of this artefact makes its categorization difficult. M3546, from Dynasty I-III at Koptos, (**map 6**) appears to be a partially polished flint axe, though this broken piece being long and thin may be an adze or hoe.

9.5.3 Adzes and hoes

Plates 61-64.

I group adzes and hoes together as the two are not always distinguishable archaeologically. Both are here distinguished from 'picks' by their relative regularity of form and wide cutting edge. It is possible that small adzes/hoes were actually used as chisels.

Adzes were used on wood and stone and hoes in the earth. While extremely irregular examples could not have been used for planning wood, it is possible that

some regular shaped examples could equally have been used for hoes. Additionally, adzes may have been reused as hoes.

Marks on limestone at 12th Dynasty Lisht (**maps 4 and 5**) suggest a wide bladed stone or metal adze (Arnold 1997, fig. 2.10). It is possible to cut soft stone using flint adzes, though hard stone would require a tool other than an adze (Stocks 1988, 250; 2003, 84). Evidence suggests that while metal tools were certainly used in stone cutting (for example the tomb of Rekhmire shows workers using metal chisels), flint was also employed. Petrie (1938, 30) states '… the adze was used in the chamber of Kho-sekhemui [Khasekhemwy] (iind dynasty), but the blade was of flint, as is shown by the chips on the edge leaving raised ridges on the stone; on the contrary, a metal tool has jagged dents on the edge which leave scores on the stone facing.' The type-5 adze or hoe (see below) was found in association with New Kingdom tomb cutting.

Hoes are depicted iconographically as a symbol of foundation (Nibbi 1978) suggesting that some archaeological examples may not simply be functional. Used hoes/adzes have been found in funerary contexts (Spencer 1980, 92), though conceivably they had simply been discarded in after being used to create the tomb. Other funerary hoes/adzes are fine and unworn (e.g. UC16739).

Pawlik 2005, (202-203) distinguishes six types from the Old Kingdom, though some types are either only slight variations on another type or are distinguished by deeper scarring or polish in a slightly different place. I have used a variant on Pawlik's classification for my types 1 and 2. My other forms are not used by Pawlik as no examples were found on his site (Kom el-Ahmar; **maps 2, 6 and 8**).

Type-1

Plate 61.

Early Dynastic-Middle/New Kingdom.

Type-1 appears to be the most common form of Dynastic adze/hoe. It equates to Pawlik's (2005, 202) 'type A'. The butt is smaller than cutting edge and both ends are convex. The cross-section is triangular or D-shaped with a flat or rounded bottom face. The bottom face may be polished near the butt possibly from contact with shaft (Pawlik 2005, 203). The flattening may be due to sharpening. Length varies from around 100–200mm. This type is very similar to the Type-1 axe, except for the flat or rounded bottom face.

Early Dynastic to Old Kingdom examples are shown in Petrie (1902, 11, pl. 20) from the temenos of Osiris. Many are from the Old Kingdom levels but some seem to

be higher perhaps even from Middle Kingdom levels. Spencer (1980, 100 pl. 79 no 749 and 750; **plate 61**) has two triangular pieces with wide cutting edges, which he classes as hoes. These date to 1st Dynasty and were found at Qau. Possible similar types are described in: Spurrell (1891, 52, pl. 8.i) from Middle Kingdom Lahun (**maps 4 and 5**); Petrie (1890 pl. 16, top left and right and mid left; top left is possibly M246 at Manchester; mid left is probably Manchester 244) from 12th Dynasty Lahun. Several of these Lahun examples have a knot at the apex. Spurrell (1891, 52) suggests that this may have been used to prevent the blade falling out of the haft. A possible Middle Kingdom 'axe' was found at Abu Ghâlib (**map 4**; Larsen 1935, 79, fig. 18 no. 22). Unfortunately only one view of this item is given. It may be an adze or hoe. For the dispute on the dating of this site see the section on microdrills.

Type-2

Plate 61.

Type-2 equates to Pawlik's (2005, 203) type 'C bar' type. The lateral edges are parallel and the butt has steeper retouch than type-1. Examples were found at Kom el-Ahmar (**maps 2, 6 and 8**) dating to the Old Kingdom. The lengths are the same as for Type-1.

One fragment found in the workman's village at Amarna (**maps 3 and 5**; Miller 1987, 144, fig. 11.3) may be of either Type-1 or 2. Miller believes that this was probably used for gravel as the leading edge and sides were both subject to wear, which he believes would not have been the case if it had been used to cut through limestone as at the Theban tombs (Seton-Karr 1905 and Mackay 1921). The broad edge would suggest a hoe rather than pick. The roughness of finish together with wear is more indicative of a hoe than adze.

Type-3

Plate 63.

Only one known example of this type seems extant – UC16739 (Spurrell 1891, 52, pl. 7.9) from Lahun (**maps 4 and 5**). It measures 117x74.8mm. The type is a very rounded form with both the cutting edge and long edges being gently curved. Knapping is fine. Spurrell classifies it as an adze and on examination of the item itself the cross-section leads me to tentatively agree. This was found in a burial with early 18th Dynasty scarabs.

Type-4

Plate 62.

A tool from New Kingdom Karnak (**map 7**; Miller 1985, 233, fig.3.11) has a rather irregular shape and is wide and flat. It measures 44x39x14mm.

Type-5

Plate 62.

Some examples of this type, though described in the original literature as picks, were associated with tomb cutting in Thebes (**map 7**; Seton-Karr 1905, pl.5.11; Mackay 1921; Debono 1971, 44–45, pl. 184; Debono 1994, 44). This Theban type is distinguished by a narrow neck and some have a rather rounded cutting edge. They appear the largest of the group being around 300mm long.

9.6 Picks

Plate 65.

This group is distinguished by its extremely rough form and at least one pointed end. It has a rounded cross-section. Some of the Theban examples are very similar to the type-5 adze/hoe, though are here identified as picks because of their pointed end. They are about the same length of the Theban adzes (Type-5) discussed above, that is c300mm. They date from the Predynastic to the New Kingdom.

Marks left in areas where stone has been quarried suggests the use of a pointed instrument. While Klemm (1986) suggests that the patterning left by these pointed instruments varies through time and that this suggests a change from stone to metal picks in the Early New Kingdom, Arnold (1997, 33–35, figs 2.7–2.10) disagrees as no metal picks with pointed ends have been found. As we shall see, however, flint ones are known.

Examples

As early as 1882 Pitt Rivers noticed ‘a kind of edged tool, sharp at the bottom and reduced to a tang at the top’ found near the 18th Dynasty tomb of Merikare at Assiut (**maps 3 and 4**; Pitt Rivers 1882, 383, fig. 1). The illustration appears to show a pick. The precise dating is unknown, they are described only as ‘pharaonique’ though the author suggests they may possibly be New Kingdom. Additionally, some of the

examples associated with New Kingdom tombs at Thebes (**map 7**) had the pointed ends of a pick (Seton-Karr 1905, pl. 5.12; Mackay 1921).

Kromer (1978, 50, pl. 16.1-3) classifies rhomboidal types from Giza (**map 4**) as axes but their pointed working edge may suggest they were used as picks. He dates them from Predynastic to Dynasty V.

Midant-Reynes (1998, pl. 28) illustrates one pick found at Old Kingdom-1st Intermediate Period ʿAyn-Asīl (**map 3**) made from a slightly modified natural boulder. The form is long and thin.

Debono (1994, 44) describes some other examples from Thebes as picks but as there is no illustration they may have the rounded ends of the types I have classified as adzes/hoes.

9.7 Bracelets

Plate 66.

Bracelets are ring-shaped, bifacially worked pieces of flint designed to be worn on the human arm. They may be polished or un-polished. Cross-sections may be oval or D-shaped.

Bifacially worked flint bracelets seem to have been manufactured from the Early Dynastic through to the Old Kingdom. It is not clear whether these pieces are finished or would have been polished (Petrie and Quibell 1896, 59, pl. 75, 100; Schmidt 1989, fig. 15, 6). Most examples are unpolished. These items are very fragile being only a few millimetres thick. As Pitt Rivers (1882, 385) comments ‘it had always struck me as singular that so unsuitable a material as flint should have been employed for the purpose.’ This, together with the time presumably taken to knap them plus the fact that they are associated with wealthy graves during a time of state formation might all indicate that flint bracelets are linked to ideas of power and prestige.

Tillmann (1992, 165) and Pawlik (2005, 204–205) both state that the earliest flint bracelets are of the Naqada Period, quoting Petrie (1896). However, this appears to be a mistake. The Petrie publication refers to Naqada and Ballas. The bracelet is described by Spurrell (in Petrie and Quibell 1896, 59) and illustrated as coming from Ballas (Petrie and Quibell 1896, pl. 75. 100). Page 51 of the publication describes the plate but does not give a date for this particular item, though other finds suggest a Dynastic date.

Outside of workshops (see below), one unpolished fragment is known from Old Kingdom Tell Ibrahim Awad (**map 4**) though the excavator suggested this might be a secondary deposit in view of the usual occurrence of these on Early Dynastic sites (Schmidt 1992, 88, fig. 8.51). Another unpolished fragment was found at Tell el-Faraʿin (Buto) (**map 4**; Schmidt 304, 1989b, fig. 15.6) in Early Dynastic contexts. Another complete example of at least 2nd Dynasty date was found at el-Ahmir with several fragments (Pawlik 2005, 204–205). This example was not polished.
Most examples which are not in workshop contexts, however, come from graves. A number of flint bracelet fragments were found in the Abydos (**map 4**) tomb of king Djer of the 1st Dynasty (PR1901.40.29–33). The body in the Early Dynastic tomb M14 at Abydos had seven flint bracelets on the left arm and one on the right (Petrie 1902, Vol. I, 16) though it is not clear if these are polished or not. Amélineau (1904, pl. 2) also found several in his excavations of Early Dynastic Abydos. Emery (Emery and Saad 1958, III) describes tomb 3507 1st Dynasty Saqqara (**map 4**), possibly the tomb of Her-nit Djer's queen, which contained 8 fragments of flint bracelets and one complete example. Ivory, onyx and schist bracelets were also found. The 1st Dynasty Grave 23 in the Giza (**map 4**) mastaba had at least 2 flint armlets (Petrie *et al.* 1907, pl. 3). It is not clear from the illustration whether or not the examples are polished. AB29, an unprovenanced example from the Egypt Centre is partially polished. Tillmann (1992, 165) refers to examples from 1st Dynasty Elephantine (**map 8**).

Spurrell (in Petrie and Quibell 1896, 92) had the idea that bracelets were formed by shaping naturally occurring rings "Nodules of flint are to be found in the limestone presenting a resemblance to Saturn with his ring. When the central boss could be detached, the ring would be used. Commonly, however, it appears that rings were found in the gravel already detached, or the division between the boss and the ring so much reduced by solution of the soluble silica so as to admit of easy separation. The finished rings in section shew [sic] a great change at the surface, greater than their age would warrant if made out of flint directly derived from the rock, though just such an amount as might be expected from flint which had lost part of its silica by exposure to the gravel and becomes porous.'' This resemblance between natural forming flint stones in the Theban area and bracelets had also been noted by Pitt River (Pitt Rivers 1882, 386). The museum of Saint-Germain-en-Laye has a partially manufactured item made from a naturally occurring ring, it appears to take the form of a bracelet and comes from Thebes (**map 7**). It is however, undated (No. 52.651, Beck and Cleyte-Merle 1982, 98).

However, other pieces have been found suggesting an alternative means of manufacture. A workshop of these artefacts is said to have been located in Wadi el-Sheik (**maps 1 and 5**; Seton-Karr 1904, 146; Weisegerber 1987). Broken discs and unfinished armlets from here, now in the Pitt Rivers Museum (Rhodes 1970, 8), show that Egyptian armlets were made by making a disc of the right diameter and then removing the centre by flaking from both sides. Currelly (1913, 272) describes 'half of a flat disc of flint in course of preparation for a bracelet; a small hole was started in the Centre.'

9.8 Comb flints

A number of these were found at Abydos (**map 4**) in the town area in levels seeming to correspond from Predynastic to Early Dynastic or Old Kingdom (Petrie 1902, 12 and pl. 26, 315-327). Petrie suggests that these were perhaps used for scraping the scales off fish.

9.9 Drill bits

Plate 67.

All appear roughly made, 'chunky' and several are very worn. They are bifacially worked to shield, crescent, Y and rod shapes. Generally the most common type of drill-bit appears to be the crescentic drill bit. Although sometimes considered separate types, the shapes appear closely related (the crescent and Y shaped pieces are discussed in more detail below). As Tillmann (1992, 173) states these all seem to have been made from wadi pebbles, or at least poor quality flint, or from quartzite. Most measure about 6x5x2cm. Microdrills are discussed in a separate category in this thesis.

Drill bits seem to have been used for drilling out stone vessels. Caton-Thompson (Caton-Thompson and Gardner 1934, 129–131, pls. 68–69) recognized a variety of bifacial tools from Qasr el-Sagh (**maps 1, 4 and 5**) as drill bits (see **page 381** for a discussion of date of this site). She sub-classed these as: shield-shaped, crescent, rods, dwarfs and then into sub-types. Holmes (1989, 412) distinguished between winged and crescent shaped pieces. The winged (Y- shaped) and crescent shaped pieces appear so closely related that they are here dealt with together. Caneva (1970) even subdivides the crescentic pieces.

Crescent Pieces

These bifacially worked items are crescent shaped with concave upper section and convex lower working edge.

This type begins in the late Predynastic (Kromer 1978, 37, pl. 14[11] cites examples; Holmes 1989, 416; contra Caton-Thompson and Gardner 1934, 129 and Caneva 1970). Other late Predynastic examples come from Tell el-Faraʿin (Buto) (**map 4**; Schmidt 1989b, 307 fig. 17 no. 14) another comes from Naqada I-II (Brooklyn 09.889.155, Needler 1984, 289). However, many more are found in later periods and they appear to continue into the New Kingdom.

Several examples are known from the Early Dynastic – Old Kingdom. 300–400 were found at Old Kingdom Saqqara (**map 4**; Firth and Quibell 1936; Lauer and Debono 1950). Several were found at Giza (**map 4**; Kromer 1978, 35–38, pl. 10). Others have been found in the Temnos of Abydos (**map 4**) late levels probably corresponding to Old Kingdom (Petrie 1902b, 12 and pl. 26, 305–314). Pawlik (2005, 204) describes three Old Kingdom borers from el-Ahmar (**maps 2, 6 and 8**). A number of examples are known from Bet Khallaf (**map 6**) dating to the 3rd Dynasty (Garstang 1903, 18, pl. 15). Examples from this site in British museums include: M1095A-D; M1102A-F; M1103A and B; Ashmolean 1896.1908 E690; Ashmolean 1959.304/1–3.

Caton-Thompson (1934, 129–131, pls. 68–69) dated the Qasr el-Sagh (**maps 1, 4 and 5**) examples to the Old Kingdom, though given more recent excavations by Arnold perhaps the site may know be reinterpreted as Middle Kingdom (Ginter *et al.* 1980). Examples from this site in British museums include (Ashmolean 1925.301 a–d; Ashmolean 1925.425/1–17). Crescent shaped borers are also known from Middle Kingdom-Second Intermediate Period Tell el-Dabʿa (Tillmann 1992, 173–175, fig. 22.2 and 3).

A number are also known from the New Kingdom. Six were found at the Ramesseum, Thebes (**map 7**; Debono 1994, 39, 41–42, pl. 4) measuring 4.5x3.5x1cm. Another of 19th Dynasty date is known from Qantir (**maps 3 and 4**; Tillmann 1992, fig. 22.2–3). New Kingdom examples are also known from Karnak-North (**map 7**; Debono 1994, 40–41) and Amarna (**maps 3 and 5**; Debono 1994, 42). Manchester Museum 11523 comes from Amarna, the North City.

The purpose of these items has been much debated. Certain excavators believed these were only used to dress the stone casing (Firth and Quibell 1936 I, 125–126, II, pl. 93–94; Caneva 1970, 170). The idea being that groups of holes would be drilled, sunk close together, and the partitions between them afterwards broken down with a hammer. Additionally, lunate or crescentic chipped stone tools have been described by

[11] Though the Theban Palaeolithic horned scraper is very similar in shape, it should not be considered part of this group contra Kromer 1978.

various authorities as having been used to bore or drill alabaster and other soft stone vases (Firth 1930; Caton-Thompson and Gardner 1934, 129–130; Caneva 1970). This is partly based upon stone vase boring equipment showing a crescentic 'drill bit' (Montet 1925; Child 1954, 193; Hester 1976, 349). However, actual illustrations are not clear as the working end of the borer is always hidden. The hieroglyph apparently ending in the crescentic piece may actually only illustrate the forked section into which the drill bit itself was fitted. Stocks (2003, 139) using experimental replication techniques showed that these tools were easily able to drill into soft stone.

However, Hester (1976, 349) after studying vase making in Upper Egypt, was of the opinion that had such vase making been used, very heavy use wear in the form of edge dulling would have been the result. Yet, the examples found show no wear and Hester is of the opinion that the actual drill bits were more likely to be sandstone or quartzite lenticular shaped which have been found with wear marks (Borchardt 1907). Contra Hester, Spencer's examples from 3rd Dynasty Bet Khallaf (**map 6**; Spencer 1980, 100–101, nos. 751–753) all showed wear and polish. I have also found additional worn examples in museum collections (e.g. Ashmolean 1925.425/3).

Y-shaped pieces

Quibell and Green (Quibell, 1900, pl. 24.24–27; Quibell and Green 1902, 39, 48, pl. 60 14) referred to the examples they found at late Predynastic-Early Dynastic Hierakonpolis (**maps 2, 6 and 8**) as 'tribrack' or 'three limbed. Ashmolean 1925.425/18 and 19 are from Middle Kingdom Qasr el-Sagh (**maps 1, 4 and 5**).

9.10 Flint animals

Around 56 bifacially worked flint animals are known (Hendrickx *et al.* 1997-1998). As over half the examples known are attributable to Predynastic Hierakonpolis (**maps 2, 6 and 8; figure 8**), Friedman (2000, 14) has suggested this may be a local industry.

Exact provenances of most are unknown but those that are known include a flint buchranium from a tomb attributed to Queen Neithotep of 1st Dynasty Naqada (Hendrickx *et al.* 1997–1998, 10). One example comes from 12th Dynasty Lahun (**maps 4 and 5**; Petrie 1890, pl.10.22; Petrie 1902b, 17; Needler and Churcher 1984, 367).

It is possible that although some are found on burial sites (an exception was found in a domestic rubbish pit at Hierakonpolis – Watrall 2000, 11–12), they may not have been destined for the grave. They are not a normal feature of burials of this period but rather occur in a limited number of royal graves. Four were found in the 1st

Dynasty temple area of Abydos (**map 4**; Petrie 1902b, pl. 26. 292–294; Petrie 1903b, pl.10.220).

Hendrickx (Hendrickx *et al.* 1997–1998) concludes that they may serve multiple purposes. Those from elite tombs are perhaps politico-religious (e.g. the bulls' heads, falcons, hippopotami and giraffes); some may be apotropaic (e.g. the crocodile, snakes and scorpions); others may be offerings (e.g. fish and birds). It is even possible that they may be toys, but wooden toys would surely have been easier to make. There is also a suggestion that since animal burials were important in this period they represent the animals themselves (Hendrickx *et al.* 1997–1998, 13).

9.11 Miniature tools and possible amulets

Miniature tools are those which are so small as to have no kinetic utilitarian purpose. Sometimes such artefacts are votive (gifts to deities) or may be amulets (used to protect the living through close association with them). The two types can often only be differentiated through context (see **Volume 1, Chapter 5**), and even then the definition is not always clear. However, amulets, being in close association with the human body, may have a suspension loop to be worn or may be small and ring shaped so as to facilitate wearing on a cord around the neck. Amuletic material is often found in secular contexts as it can be accidentally lost. Many thousands of faience 'amulets' for example were found at Amarna (**maps 3 and 5**) and it is postulated that these were accidentally dropped. Amulets may however, also be found in ritual contexts. Votive material is less likely to be found in purely secular contexts. Clearly votive nodules were discussed in **Volume 1, Chapter 5**. Here I discuss flint artefacts which are more likely to be amuletic.

Miniature items found on settlements are possibly more likely to be amuletic than votive. A miniature Early Dynastic flint knife found by Petrie (1902b, 24 pl. 51) in the town of Abydos (**map 4**) indicates amuletic/protective qualities. It is possible that it is a votive deposit, though its use on a settlement site makes this less likely, though not impossible.

Miniature items in tombs may be either amuletic or votive. Two First Intermediate Period model knives, one in crystal were found at el-Ashmunein a cemetery (**maps 3 and 5**; Spencer 1993, 61, pl. 96. nos. 314 and 315). Amuletic or votive polished flint knives have been found in the tomb of Tutankhamun (Murray and Nutall 1963, 620/ 62, 63). These are very similar to the seven 'limestone' miniature knives found in the tomb of Queen Tiye (Davis 1910 reprinted 2001, 38, pl. 2), and

thus dating to the 18th Dynasty. These latter knives seem to have been limestone with flint inclusions (Bell 1990, 105, fig.3). Their length varies from 138 to 168 mm. While this could arguably be considered within the range size of a small flint knife, they are not sharp enough to be used. Interestingly, I have found no examples of model knives in materials other than stone. This is distinct from models of other tools such as throwsticks, which may be made of faience. It is conceivable therefore, that the ideal type of knife, as conceived by the Egyptians, should be made of stone. Early Dynastic amuletic flint *psš-kf* are also known (e.g. British Museum 37279 (Petrie 1902, 24 and pl. 51. 22; Spencer 1980, 101 (755), pl. 79). Later amuletic *psš-kf* in other materials are published (Roth 1992).

An interesting ivory object apparently imitating a flint blade is known from Abydos inscribed with the name of the 1st Dynasty king Aha (Petrie 1901, 21, pl. 36). It is unclear if this was votive or amuletic.

Amuletic flints of non-knife form occur at Deir el-Medina (**map 7**), presumably New Kingdom in date (Bruyère 1933, 7) and a pendant of 'roughly ground and pierced' black flint was found at Tanis dating to the Ptolemaic Period (Petrie 1985, 34). In these two cases at least we can assume the material and not the form was the protective element. There is a problem however, in recognising flint as an amuletic material, for when it is particularly attractive and thus selected for wear and/or polished it tends to be termed 'chalcedony'.

10. Borers

Plates 68 and 69.

The class 'borer' (sometimes called a 'burin,' 'awl' or 'perforator' or even a 'graver') may be produced on blades or flakes. These have a small projecting retouched element which could be used for piercing or rough drilling. They are more irregular than the pointed blades. Burins, which may be classed as a sub-type of this, are manufactured by flaking off a 'burin' spall using a burin blow technique (Crabtree 1982, 27; Inizan *et al*. 1999, 132). It is not always possible to tell from published reports if the type is a true burin or not.

Such artefacts seem to have been used to start holes in artefacts, usually by rotating the flint tool into the subject matter. Microdrills and crescent shaped drill bits have a similar function but are discussed separately. The latter were used not so much to start holes but to make a perforation through more prolonged rotation. While blades with points or even unretouched flakes could have been used for the same purpose,

borers are made on a flake or blade so that shoulders and a point are apparent. Drill bits are usually more regular and, since they are used for drilling rather than starting a hole, have a much longer pointed section. There are however, problems of definition. Some shouldered pieces could have been used for drilling holes. Experimental work by Altinbilek *et al.* (2001) clearly shows that flint shouldered points could be used for drilling holes in beads of both hard and soft stone. Some pointed or beaked pieces may well have been used as gravers. Experimental work by Stocks (1988, 263-4; 2003, 83-96) showed that flint effectively scrapes hard or soft stone. Stocks carved hieroglyphs in granite using hammer-driven flint chisels and obtained a rate of 5 cm^3 per hour of rock removal Stocks (2001). Few pieces show evidence of rotary motion.

The type is also found in Bronze Age Levant (Rosen 1997, 68-71) and flake awls, some with cortex, also occur on early 2nd Millenium Nubian sites (Gratien and Olive 1984; Säve-Söderbergh 1989).

The earliest borers of which I am aware come from Early Dynastic Helwan (**map 4**; Hikade 2004b, pl.35.1) and Early Dynastic Hierakonpolis (**maps 2, 6 and 8**; **fig. 2**; Adams 1995, 148 and **plate 69.2**). Others come from Old Kingdom ʻAin el-Gazzareen (**map 3**; Kobbuseiwicz 2003, fig.III. 4–5) and the Fayum (**maps 1, 3, 4 and 5**; Caton-Thompson and Gardner 1934, 129, pl. 56.9). EES 657 is a flake borer of jasper from Elephantine (**map 8**; Hikade 2002, 316, fig.8b). An example made on a blade is known from late Old Kingdom to First Intermediate Period ʿAyn-Asīl (**map 3**; Midant-Reynes 1998, 25, pl. 15). 'Burins' are also known from Middle Kingdom Karnak (**map 7**; Debono 1982, 381). UC7572ii is from Middle Kingdom Lahun (**maps 4 and 5**) and exhibits wear striations. A concentration of flake borers was also found during the 2003-4 excavations at the Middle Kingdom, Red Sea Egyptian port of Mersa Gawasis (http://www.archaeogate.org/egittologia/article.php?id=182 accessed 7.2.2006) in association with shells, which it is suggested, points to their use in the manufacture of shell beads and other shell artefacts. A Second Intermediate Period borer comes from a grave at Qau (Ashmolean 1923.548a) which is remarkably similar to the drill bits used in experimental work for drilling holes in beads by Altinbilek *et al.* (2001).

New Kingdom and later borers are published by Miller (1985, 230, fig.1. 2). These look more like pieces used to start holes as their irregular shape would produce an irregular perforation. Other examples are known from New Kingdom Kôm Rabîʿa, Memphis (**maps 3 and 4**; Giddy 1999, e.g. EES 1189 which is 7.2cm long) and from Quantir comes an example with both ends retouched (Tillmann 1986, 2, 6). Others

from Quantir appear from cortex to have been made from river pebble flakes include (Tillmann 1992, 85–86, pl. 19, 20, 21).

At East Karnak (**map 7**) in the Saite Period ‘awls’, Miller classifies them as ‘borers’ made on flakes are associated with bead making together with late dynastic unfinished beads (Miller 1985). These are at the larger end of the micro drill category and not so fine or regular as the microdrills.

11. Anomalous artefacts made from flint

This section consists of those artefacts which do not fit easily into the above typology.

A flint bowl of 2nd Dynasty was said to have been found in 4th Dynasty temple of Menkaure (Reisner 1931, 102, fig. 57 no. 37) depicting a cat goddess standing by the cartouches of Raneb and Hotepsekhemwy. A vase grinder’s workshop at Hierakonpolis (**maps 2, 6 and 8**) is also said to have included flint vessels (Quibell and Green 1902, 17).

A 3rd Dynasty mastaba at Giza (**map 4**; mastaba T) produced an elongated round ended polished flint artefact (Petrie 1907, pl. 3A).

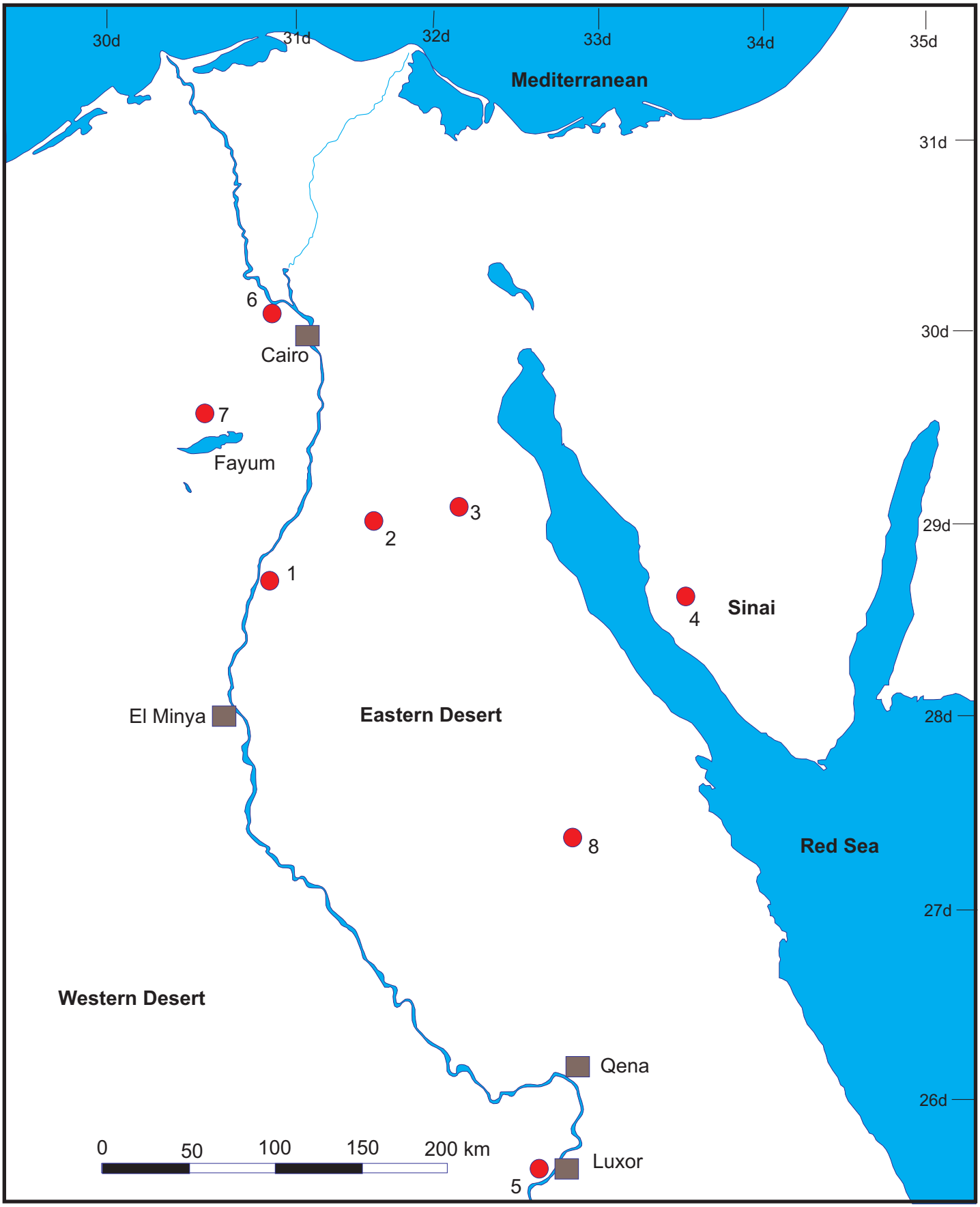
According to the online catalogue, there is an example of a flint stela, (Louvre number E11101; Louvre online catalogue http://www.insecula.com/oeuvre/O0000924.html). It is apparently of the New Kingdom 18th Dynasty and measures 9cm by 12.9cm). The same site cites a flint weight with the name of Tuthmosis of the 18th Dynasty which weighs 76.63 grams (Louvre E9341; Louvre online catalogue http://cartelfr.louvre.fr/cartelfr/visite?srv=car_not_frame&idNotice=3410

INDEX TO SITES

Sites listed in the thesis are here given their location and map numbers.

Site Name	Latitude/Longitude	Map Number
ʿAyn-Asīl	25° 34’N 29°16’E	3
ʿAyn el-Gazzareen	25° 33’N 28°56’E	3
Abu Ghâlib	30° 16’N 30°56’E	4
Abu Roash	30°03’N 31° 05’E	1, 4
Abusir	29°53’N 31°13’E	4
Abusir el-Melek	29°15’ 31° 05’E	4, 5
Abyos	26°11’N 31° 55’E	4
Amarna	27°38’N 30°53’E	3, 5
Armant	25°37’N 32°32’E	6
Ashmunein, el-	27°47’N 30°48’E	3, 5
Askut	21°38’N 31°06’E	9
Assiut	27°11’N 31°10’E	3, 4
Avaris (Tell el-Dabʿa, Pirameses)	30°47’N 31° 50’E	4
Balamun, el-	31°15’N31° 34’E	4
Beni Hasan	2756’N 3053’E	5
Beth Shan, Israel	32° 30' 0 N35° 30' 0 E	not on map
Bet Khallaf	26°19’N 31°47’E	6
Bigah Island	24°01’N 32°53’E	2, 8
Buhen	21°53'N 31°16' E	9
Busiris	30°55’N 31°14’E	4
Deir el-Bahri	25°44’N 31° 36’E	7
Deir el-Medina	25°44’N 32° 36’E	7
Dendera	26°08’N 32°40’E	6
Edfu	24°59’N 32°52’E	2, 8
Elephantine	24°05’N 32°53’E	8
Fayum	29°20’N 30°40’E	1, 3, 4, 5
Gebel Barkal, Nubia	18°31’N 31°49’E	9
Gebel Jumal, Nubia		
Gebel Safr, Wadi Abu Ha	uncertain	1
Gebelein		
Giza	29°59’N 31°08’E	4
Gurob	29°12’N 30°57’E	3, 4, 5
Harageh	29°12’N 30°59’E	4
Helwan	29°51’N 31°20’E	4
el-Hibis, Kharga Oasis	25°29’ N 3033’E	3
Hierakonpolis (Kom el-Ahmar)	2505’N 3247’E	2, 6, 8
Kab, el-	25°07’N 32°48’E	6, 8
Karnak	25°43’N 32°40’E	7
Kerma	19°38'N 30°25’E	9
Kom Abu Billo	30°26’N 30°49’E	4
Kom el-Ahmar (Hierakonpolis)	25°05’N 32°47’E	2, 6, 8
Kom el-Hisn	30°48’N 30°36’E	3, 4
Kôm Rabîʿa, Memphis	29°51’N 31°15’E	3, 4
Koptos	26°00’N 32°49’E	6
Kurru, el-	18°25’N 31°46’E	9
Lahun (Kahun)	29°14’N 30°59’E	4, 5
Lisht	29°34’N 31°13’E	4, 5
Luxor	25°42’ N 32°28’ E	1, 3, 7
Maadi	29°58’ N 31° 16’E	4
Meidum	29°24’ N 31°09’E	3, 4
Mirgissa	21°49’N 31°10’E	2, 9

Naga e-Dêr	26°22’N 31°54’E	6
Nagada	25°54’N 32°43’E	6
Philae	24° 01’N 32° 53’E	2, 8
Qasr el-Sagh	29°36’N 30°41’E	1, 4, 5
Qantir/Piramesse	30°48’N 31°50’E	3, 4
Saqqara	29°51’N 31°14’E	4
Semna	21°30’N 30° 57’E	9
Siwa Oasis	29° 10’ N 25° 33’E	3
Soleb	20°27’N 30°20’E	9
Tell el-Dabʿa (See Qantir/Pirameses)		
Tell el-Faraʿin (Buto)	31°12’ N 30°45’E	4
Tell el-Farka		4
Tell Ibrahim Awad	30°51’ N 31°41’E	4
Thebes (see Karnak)		7
Timna (Israel)	29° 45’N 34°56’E	3
Uronarti	21°32’N 30° 57’E	9
Wai Hammamat	29°N	3
Wai Maghara		1
Wai el-Sheik	28°41’N 31°03’E	1, 5
Wai Umm Nikhaybar	29° 4.67m N, 31° 35.45m E	1
Wai Sojoor	225°32’N 32°32’E	1

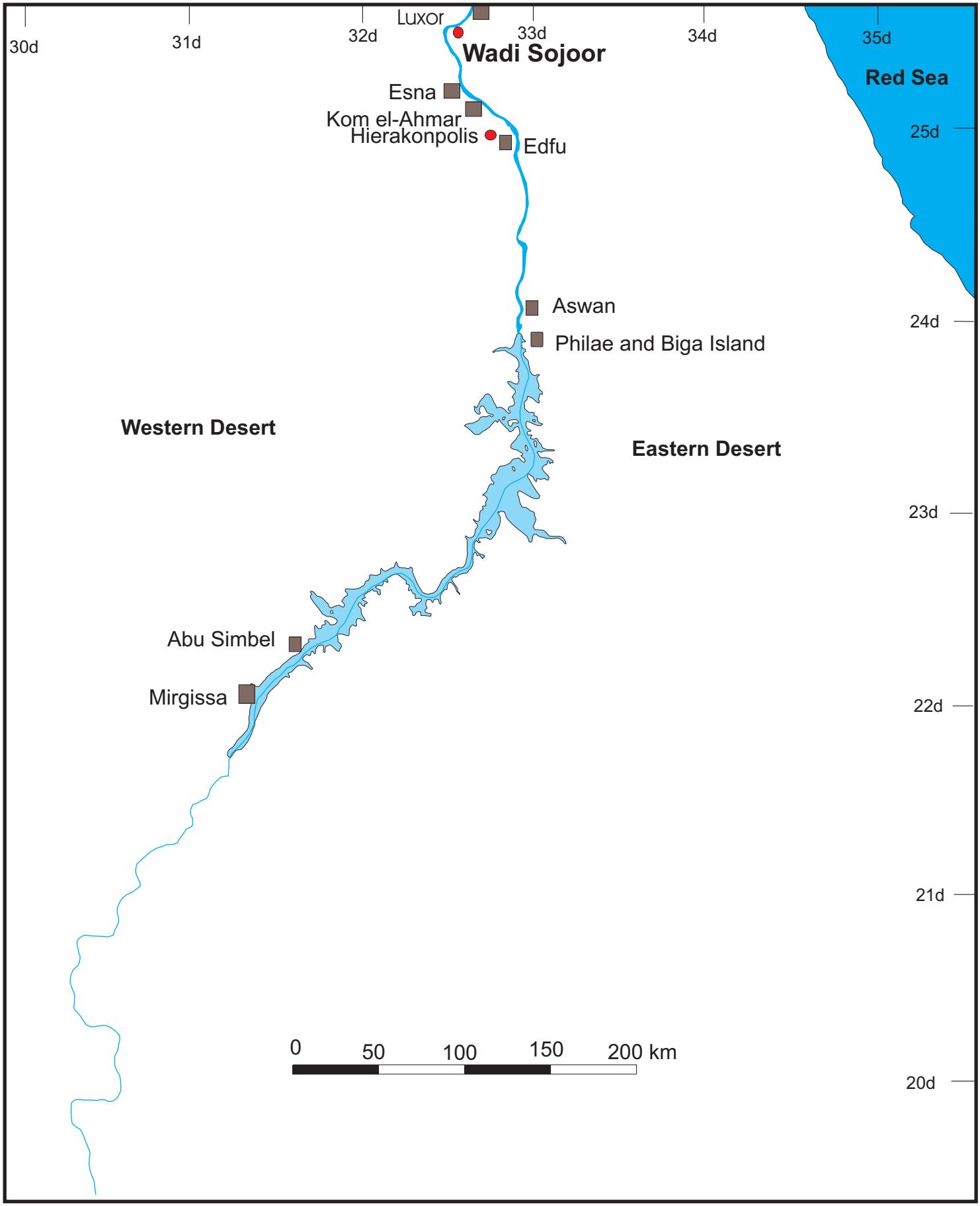


1 Wadi el-Sheik
2 Wadi Umm Nikhaybar
3 Ain Badar
4 Wadi Maghara
5 Thebes, west
6 Abu Roash
7 Qasr el-Sagh
8 Gebel Safr, Wadi Abu Had

Flint sources

Modern towns/cities

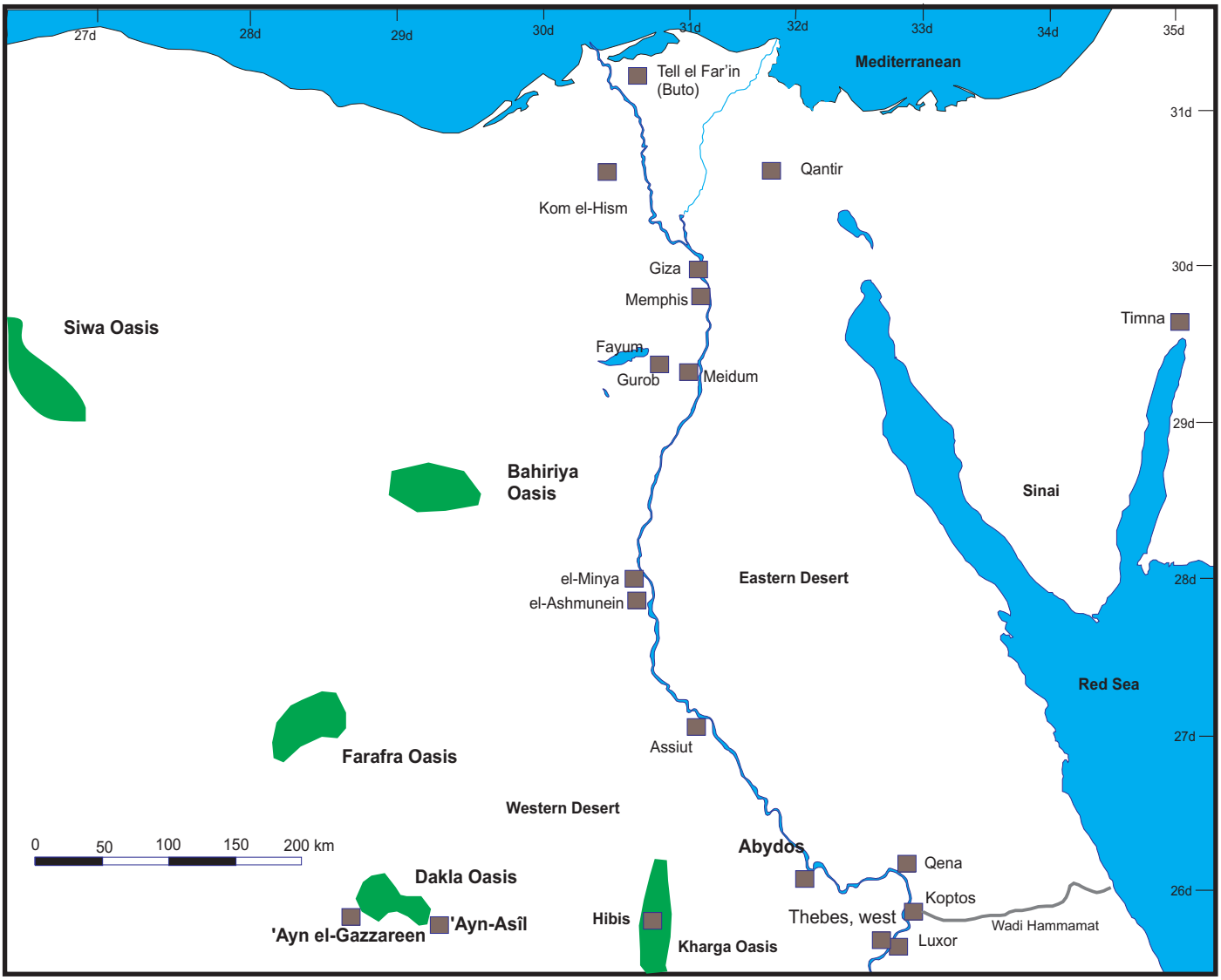
Map 1. Flint sources and other main sites, north



Map 2.
Flint Sources and other main sites, south

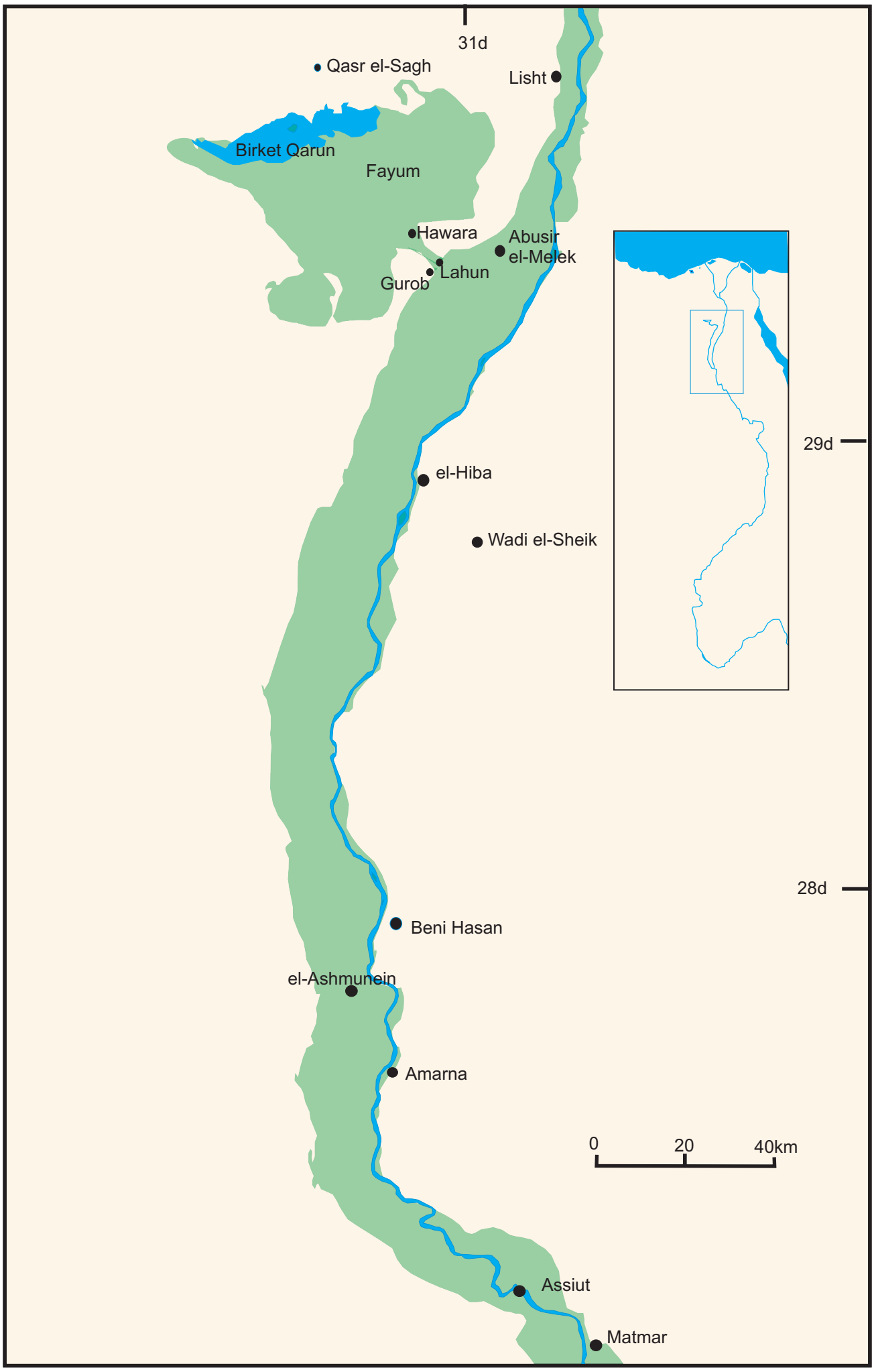
Flint sources

Towns/cities and other sites cited in text

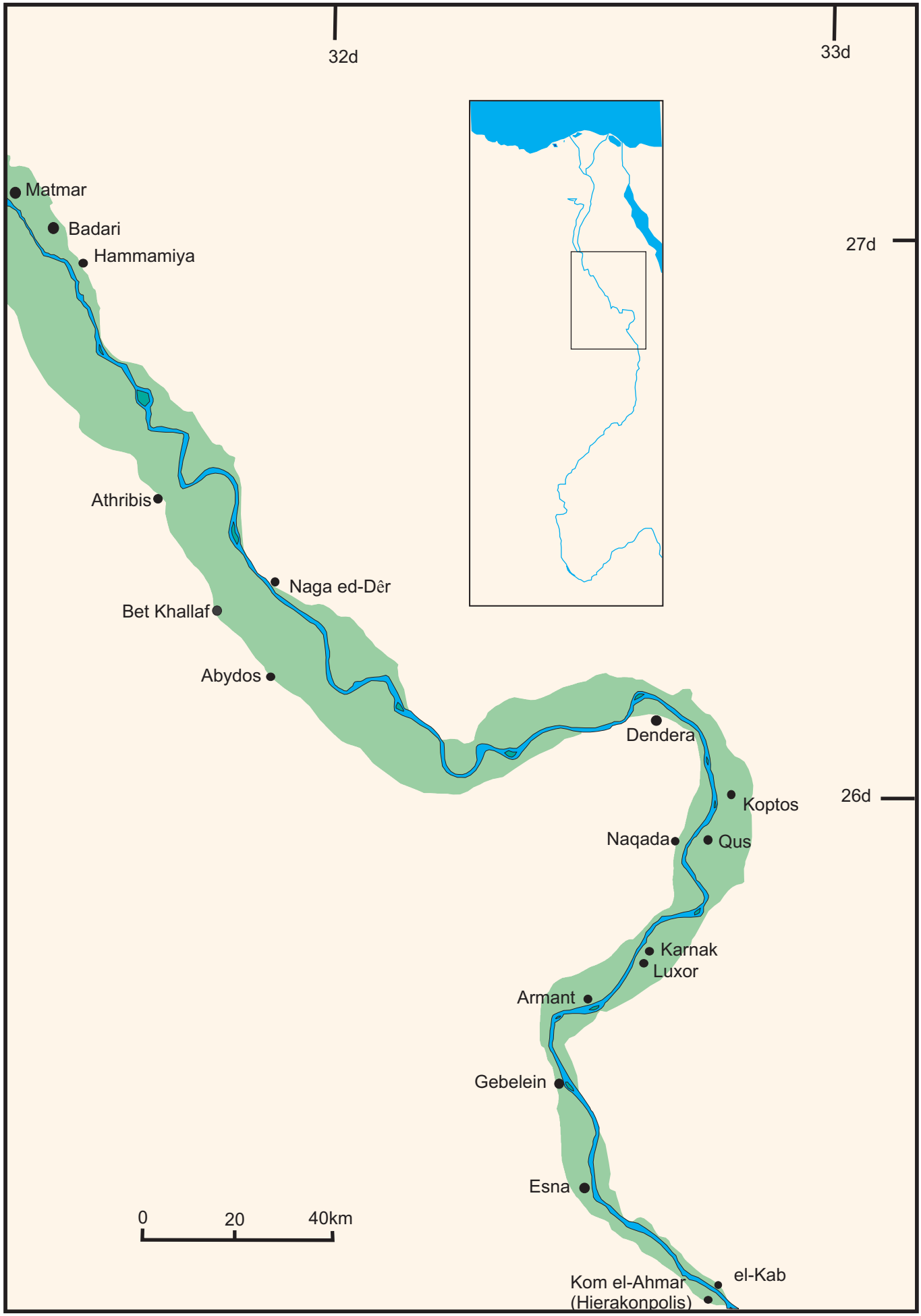


Map 3. Main sites including oases

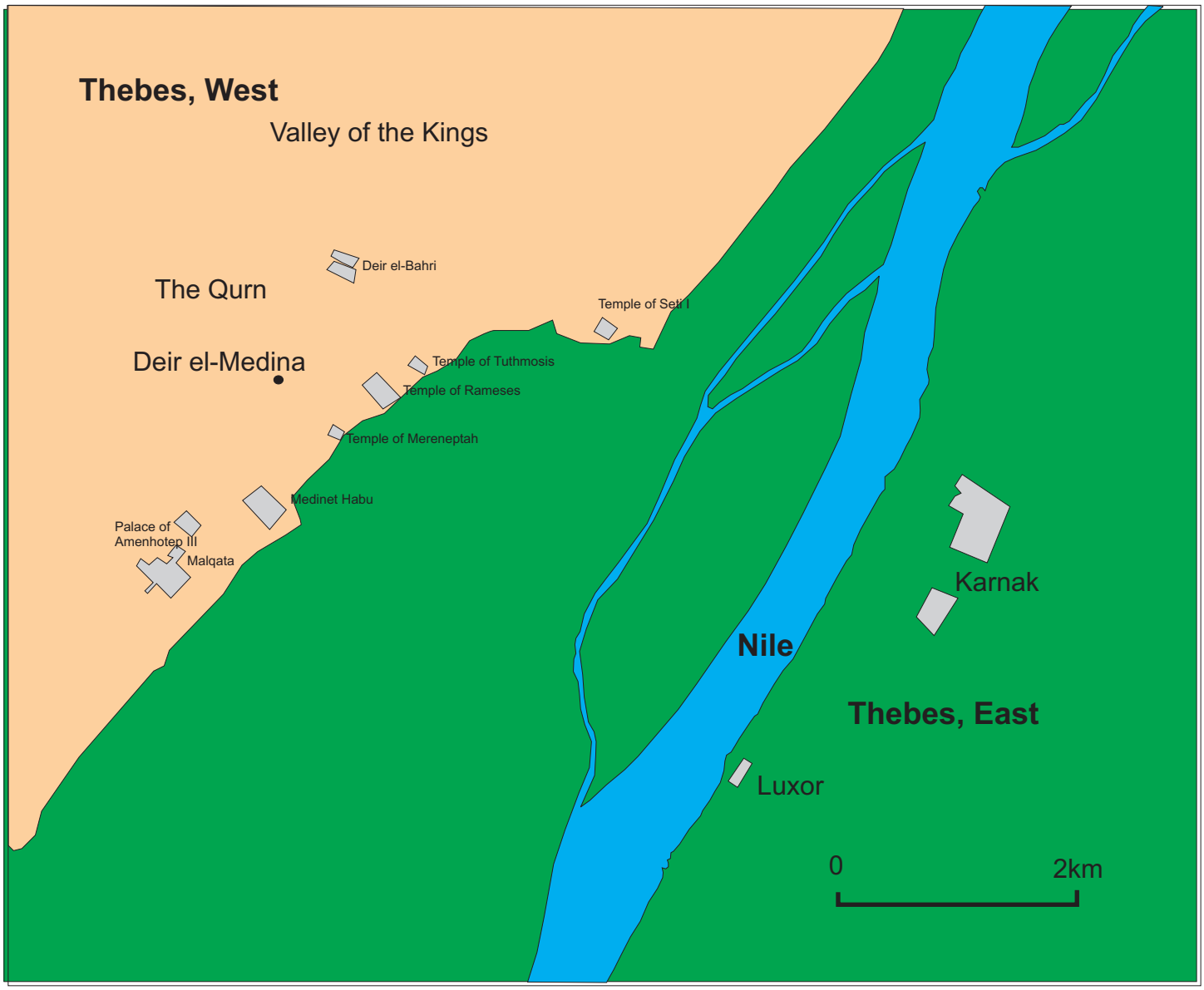
Map 4. Delta and Fayum



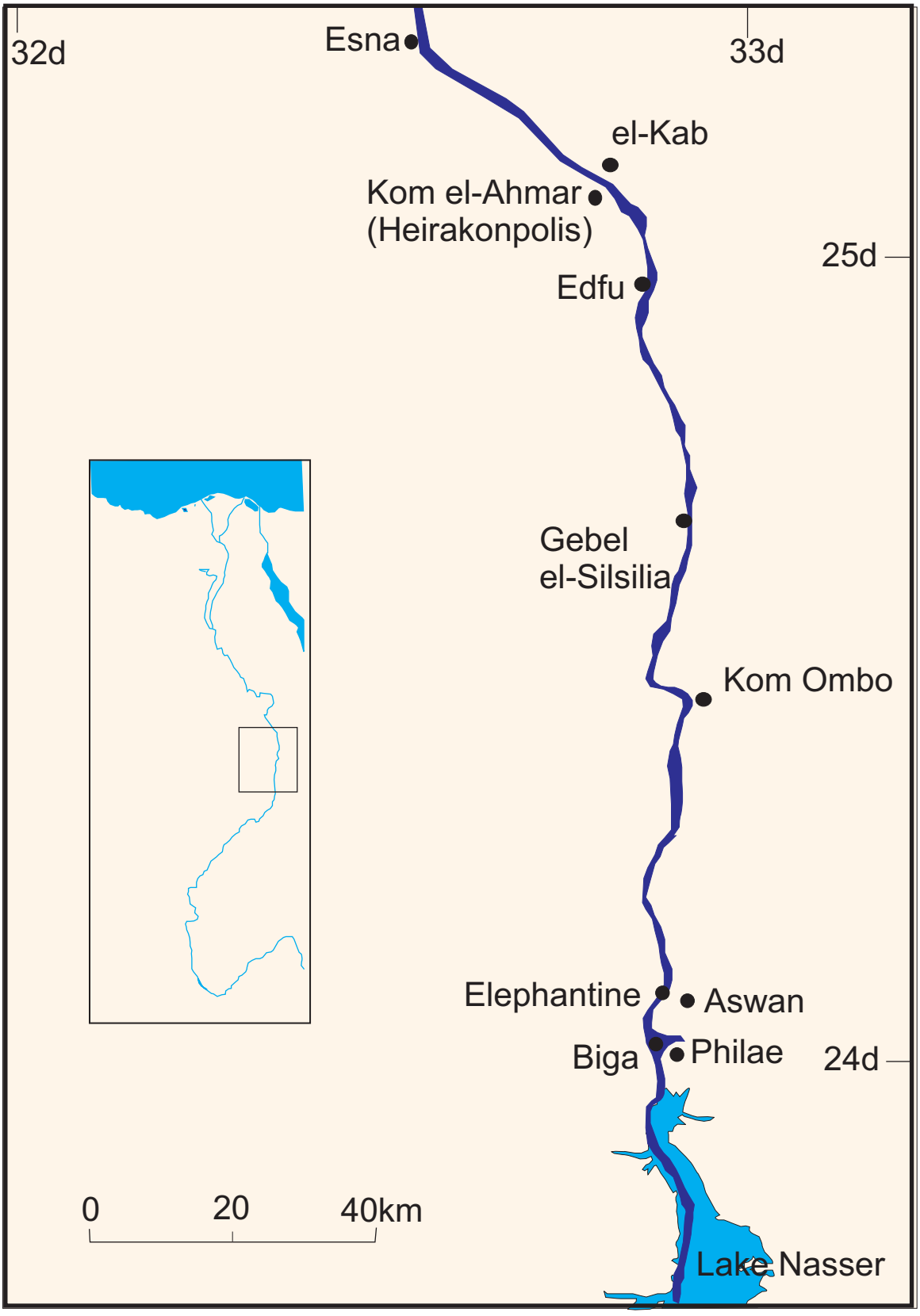
Map 5. Fayum to Matmar



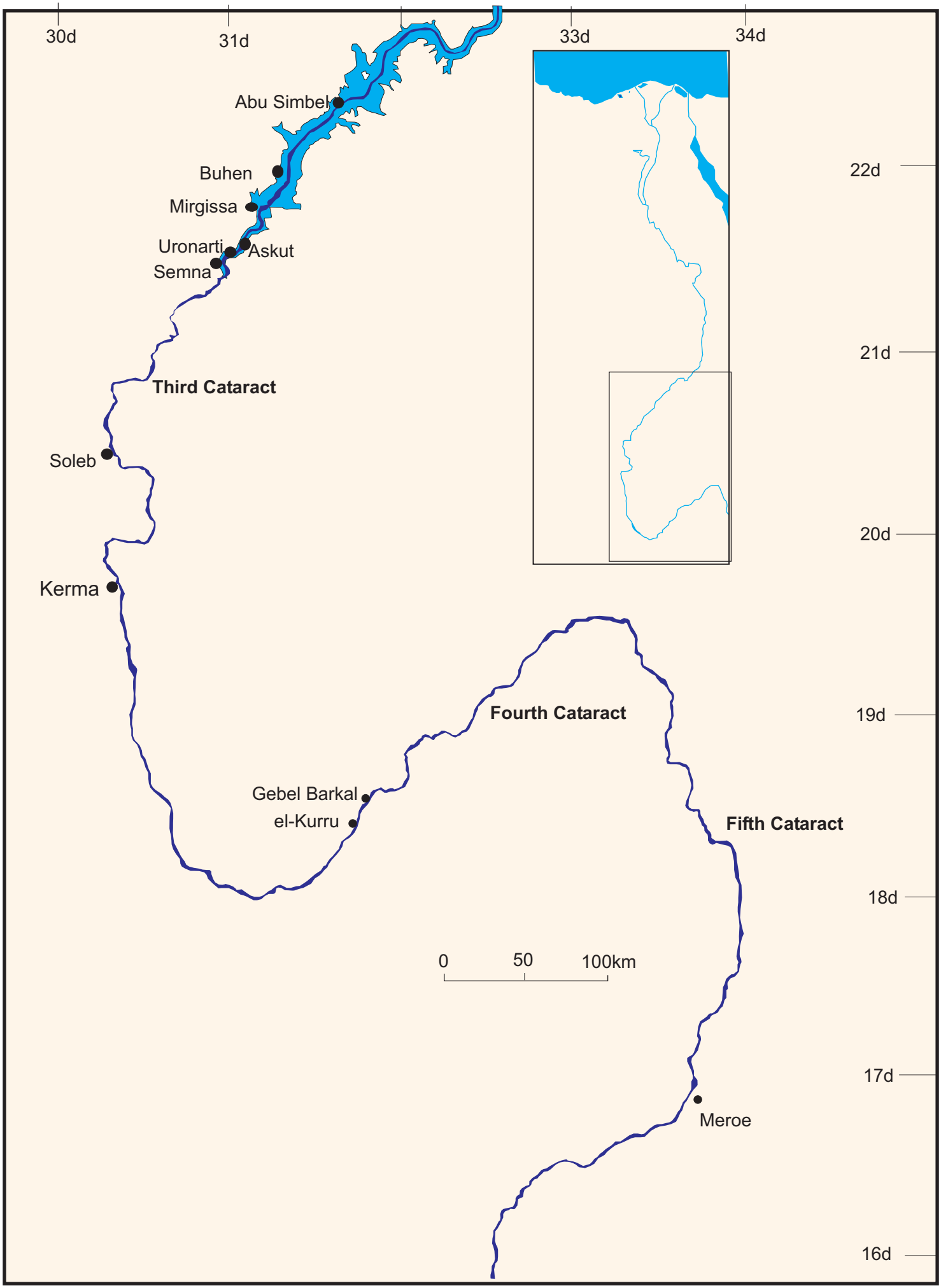
Map 6. Matmar to el-Kab



Map 7. District of Thebes



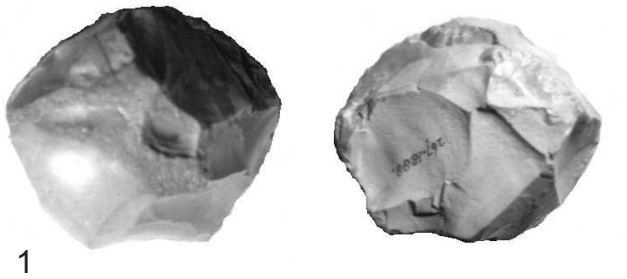
Map 8. Esna to Lake Nasser



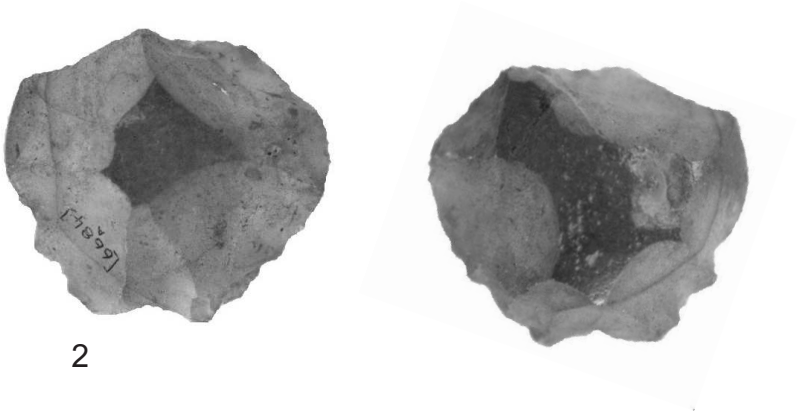
Map 9. Nubia, Abu Simbel to Meroe

Cores and Chopping Tools

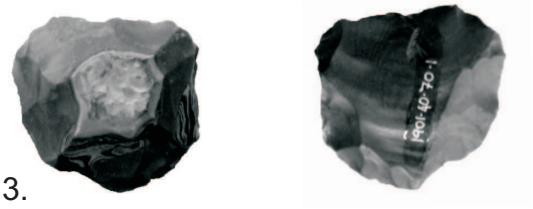
Plate I



1



2



3.

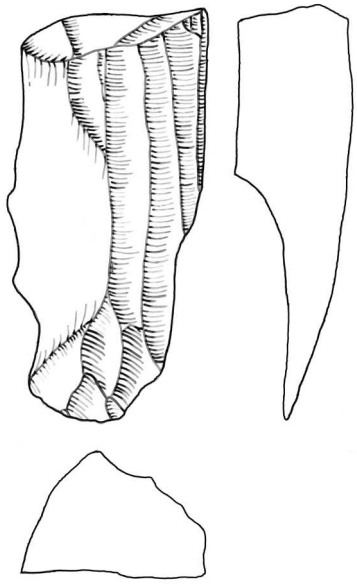
3cm

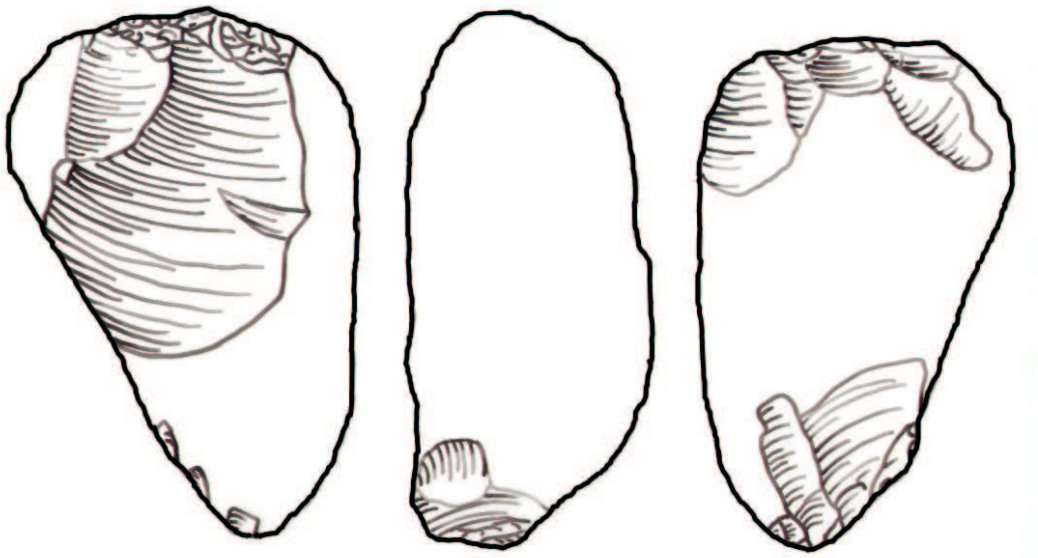
1. Ashmolean 1888.267/8, Tell el-Yahudiya, Middle Kingdom
2. M6684A, Lahun, Middle Kingdom
3. PR. 1901.40.70.1, Abydos, 1st Dynasty, Tomb of Den

Cores and Chopping Tools

Plate 2

1





2

Sizes unknown

1. Helwan, Early Dynastic, 1st Dynasty after Hikade 2005, pl. 34.1;
2. Chopper, Qantir, New Kingdom, after Tillmann 1992, pl. 12.1

Burnishers

Plate 3

UC59580

UC59581

Actual size

UC154 (image from online catalogue)

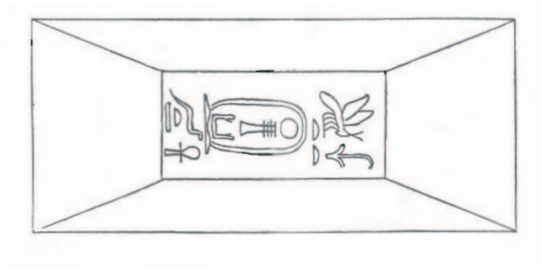
‘Funerary Palettes’

Plate 4

1

2

3.



4 UC11771

5.

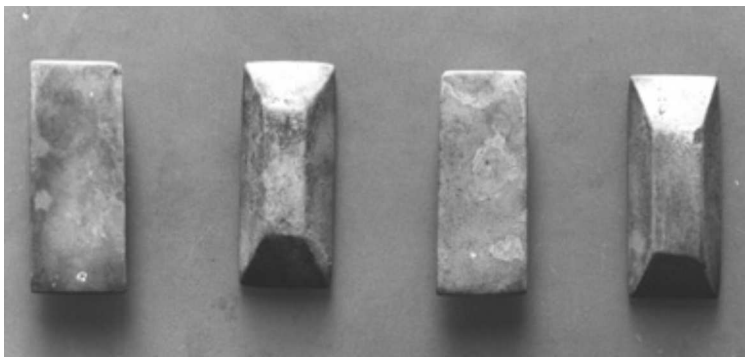
3cm

1. Berlin 22842 (after Scharff 1931, pl. 5.106)
2. UC59563
3 Uc59564
4. UC11771
5. Copper ‘razors’ (after Scharff 1931, 61 fig.16)

‘Funerary Palettes’ Plate 5

1

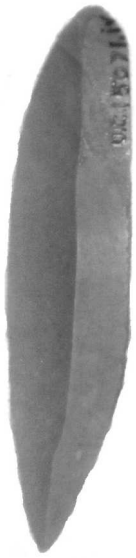
2



1. Kharga Oasis Museum 577, Tell el Dab’a, First Intermediate Period-Second Intermediate Period, 9cm long
2. ‘Paint slabs’ from the Tomb of Tutankhamun (Carter number 32o) measuring 78-81mm in length. Photo from: Griffiths Institute Archive

Regular and Symmetrical Blades Plate 6

1.



2.

3.

4.

Actual size

1. Dynasty 1, Abydos, M6771C
2. Old Kingdom El Kab, Mastaba 141, UC15071iv
3. Old Kingdom Buhen, UC20003
4. 12th Dynasty Lahun, L56.20.72

Irregular Blades

Plate 7

1.

2.

3.

Actual size

1. 12th Dynasty Kahun, M244
2. Second Intermediate period Qau, Grave 1304, Ashmolean 1923.548a
3. 18th Dynasty Amarna, M2510

Broad Blades

Plate 8

1.

2.

1. 4th Dynasty Meidum, Ashmolean 1891.583E
2. 0-2nd Dynasty Coptos, M5389B

Actual size

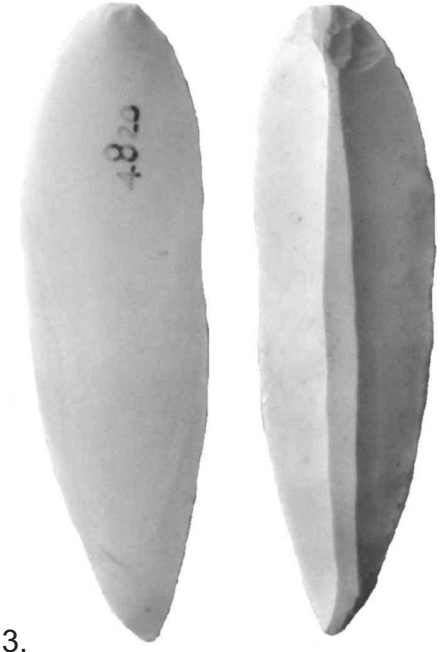
Intermediate Blades

Plate 9

Actual size

1.

2.



3.

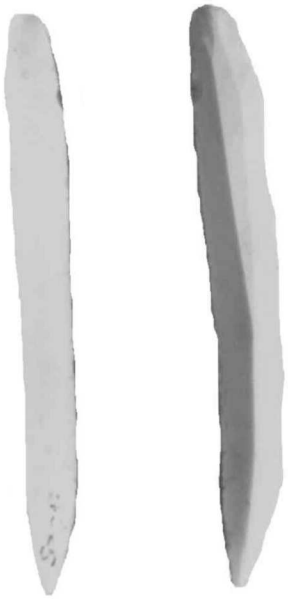
4

1. 3rd Dynasty Meidum, M2242/1-4
2. 3rd Dynasty, tomb 55, Meidum, M5169C
3. 1st Dynasty Giza, M4820
4. 4th Dynasty Meidum, Ashmolean 1891.583F

Narrow Blades

Plate 10

1.



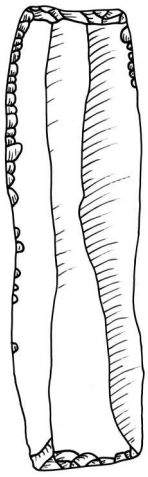
Actual size

2.

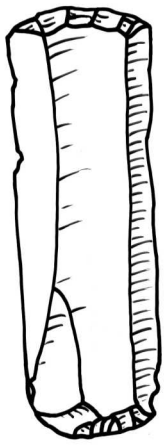
1. Giza, 1st Dynasty, M4825
2. Amarna, New Kingdom, 18th Dynasty, BM EA 55153

Narrow Blades

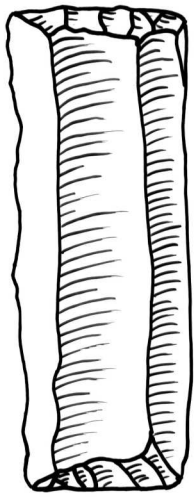
Plate 11



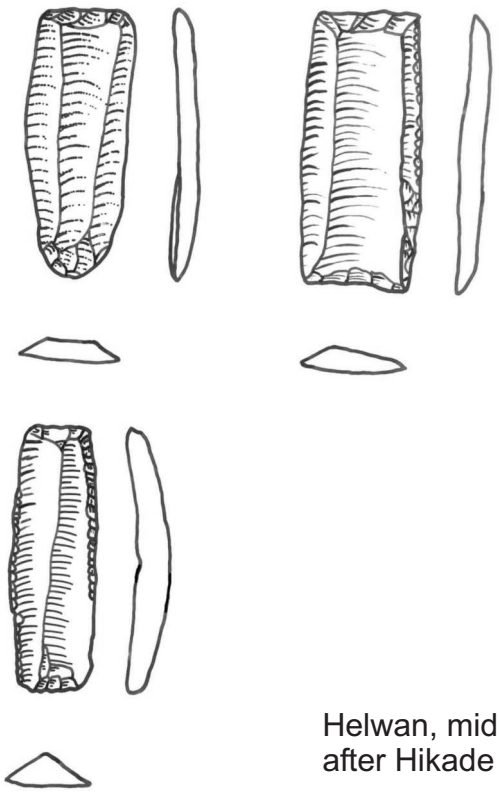
After Spencer 1980, 729a
Saqqara, 1st Dynasty



After Spencer 1980, 726
Abydos 1st Dynasty



After Spencer, 1980 727
Abydos 2nd Dynasty



Helwan, mid 1st-mid 2nd Dynasty,
after Hikade 1999, fig 3

Actual size

Unretouched, Segmented Blades Plate 12

1.

2.

3.

4.

Actual size

1. Buhen, Middle Kingdom, Durom 1964.110
2. Buhen, Middle Kingdom, Durom 1963.137
3. Harageh, Middle Kingdom, UC6455ii
4. Harageh, Middle Kingdom, UC6455iv

Complete Blades with Lateral Retouch Plate 13

1.

2

3.

4.

Actual size

1. Middle Kingdom, Lahun, UC7527iv(2)
2. Middle Kingdom, Tell el Yahudiya, Ashmolean 1888/267/5
3. Middle Kingdom, Tell el Yahudiya, Ashmolean 1888/267/6
4. Middle Kingdom, Tell el Yahudiya, Ashmolean 1888/267/7

Segmented Blades with Lateral Retouch (no gloss)

Plate 14

1.

2.

3.

4.

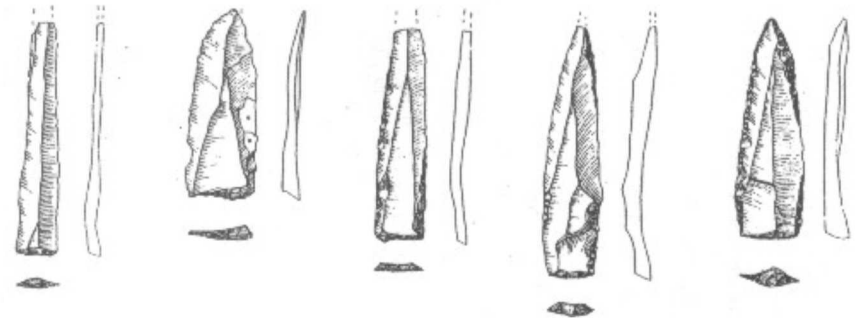
Actual size

1. Middle Kingdom Lahun, UC7527iii(2)
2. Middle Kingdom Lahun, UC7575vii
3. Middle Kingdom Lahun, UC7527iv(4)
4. Middle Kingdom Lahun, UC7525iv(3)

Truncated, Triangular Blades, no gloss Plate 15

Helwan, mid 1st -mid 2nd Dynasty,
after Hikade 1999, fig. 3.b

Actual size



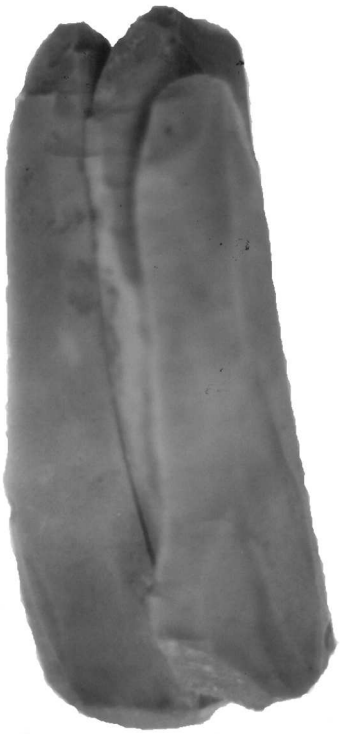
Tell Ibrahim Awad,
Early Dynastic-Old Kingdom,
after Schmidt 1992 fig. 3, 11-15
(size unknown)

Refitted Bitruncated Blades Plate 16

1.

2.

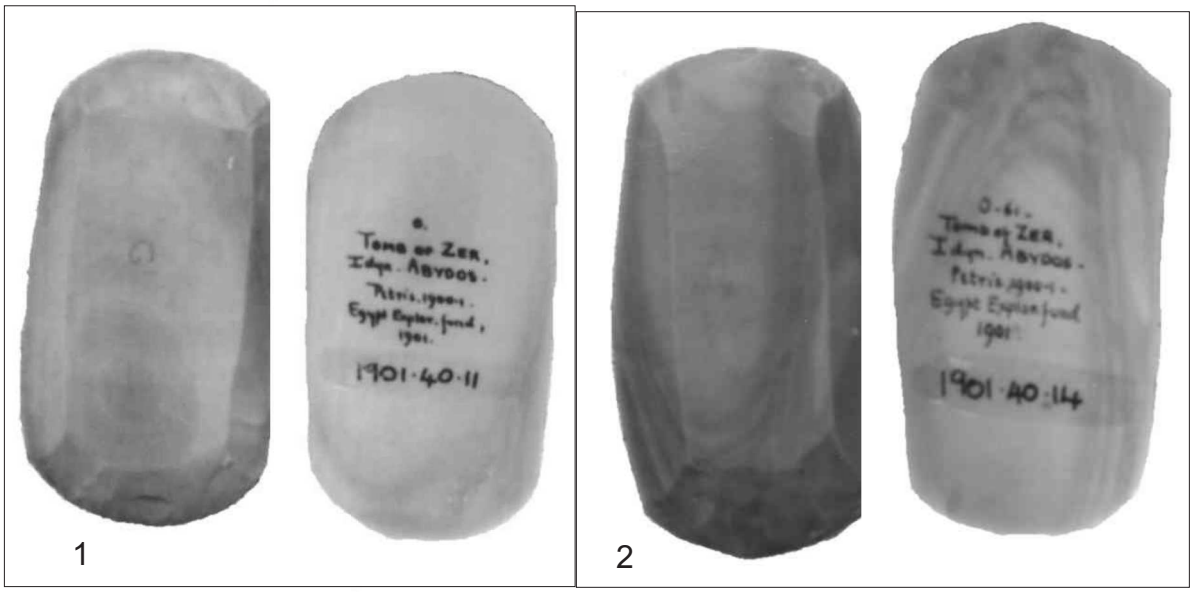
3.



Actual size

1. L56.20.108-109, Tomb of Rahotep, 3rd Dynasty Meidum
2. BM EA68780/1-2, 4th Dynasty Meidum
3. BM EA68778/1-3, 4th Dynasty Meidum

Broad Bitruncated, Round-ended Blades Plate 17

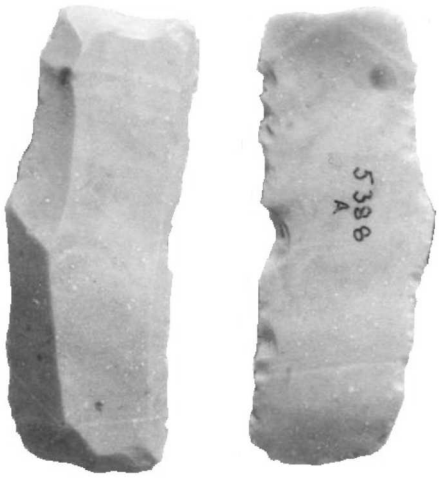


Actual size

From the tomb of Djer, Abydos, 1st Dynasty: 1. PR1901.40.11;
2. PR1901.40.14; 3.PR1901.40.15; 4.. PR 1901.40.16

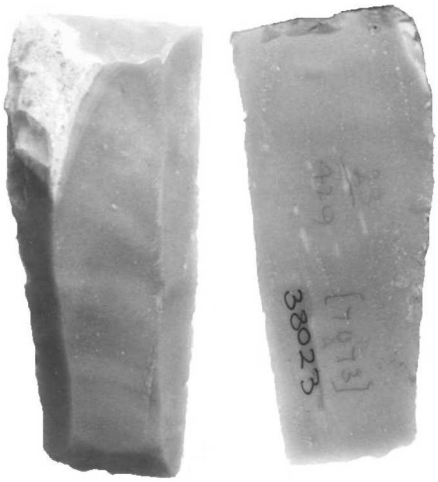
Broad Bitruncated Blades

1

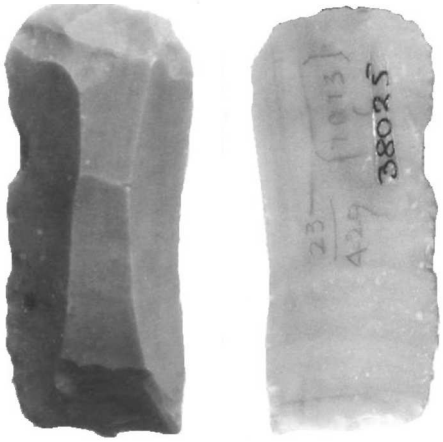


2

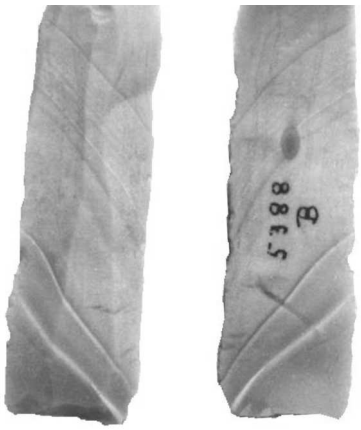
3



4



5

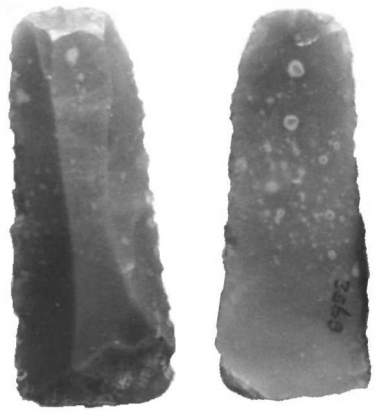


6

Actual size

1. Abydos, tomb of Khasekemwy, 2nd Dynasty, PR1901.40.109; 2. Abydos, Dynasty 0-1, M5388;
3. Qau, 2nd Dynasty M7073b; 4. Qau, 2nd Dynasty M7073A; 5. Qau, 2nd Dynasty, M7073C
6. Abydos, Dynasty 0-1, M5388B

Intermediate Bitruncated Blades



1

2

3

4

5

Actual size

1. Coptos, 1st Dynasty, M3569
2. Coptos, 1st Dynasty, M3576
3. Coptos, 1st Dynasty, M3567
4. Mastaba 14, El Kab, Old Kingdom UC15071vi
5. Coptos, 0-2nd Dynasty, M5389A

Blades in Mallawi Museum

Plate 20

1.

Mallawi Museum 401-409
Tuna el-Gebel, Graeco-Roman (c.7cm long)
(published without picture in Messiha and Elhitta 1979, 19)

2.

Mallawi Museum
Tuna el-Gebel, Graeco-Roman

Pointed Blades

Plate 21

PR 1901.40.7

PR1901.40.8

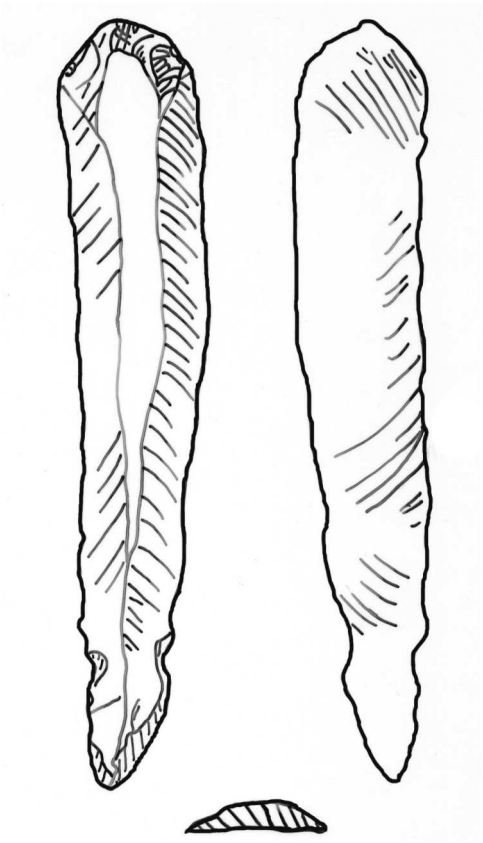
PR1901.40.9

Tomb of Djer, Abydos, 1st Dynasty

Lahun, 12th Dynasty (?)
PR1889.27.18

Actual size

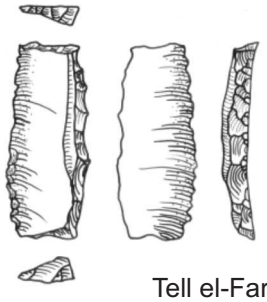
Long, Narrow, Notched Blades Plate 22



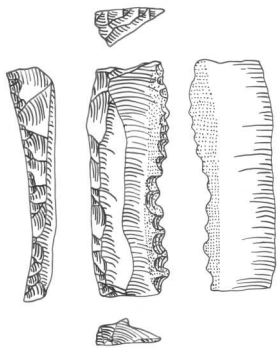
Old Kingdom Fayum,
after Caton-Thompson and Gardner 1934, pl.82.3
size unknown

Early Dynastic Sickle Blades

Plate 23



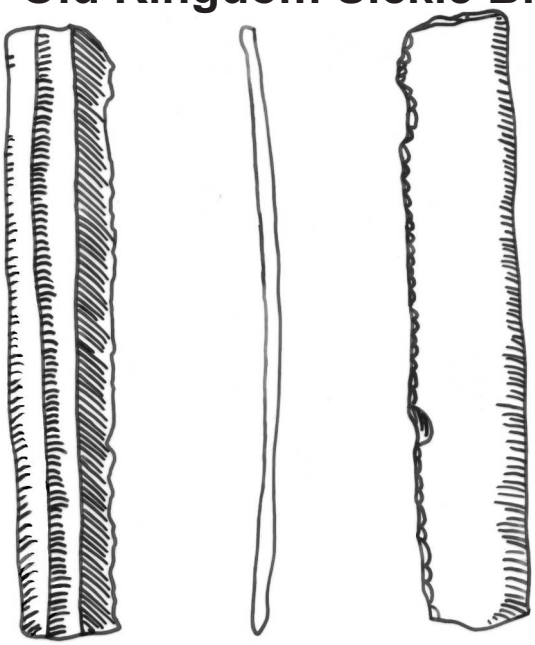
Tell el-Fara'in - Buto,
after Schmidt 1989b fig.14.1



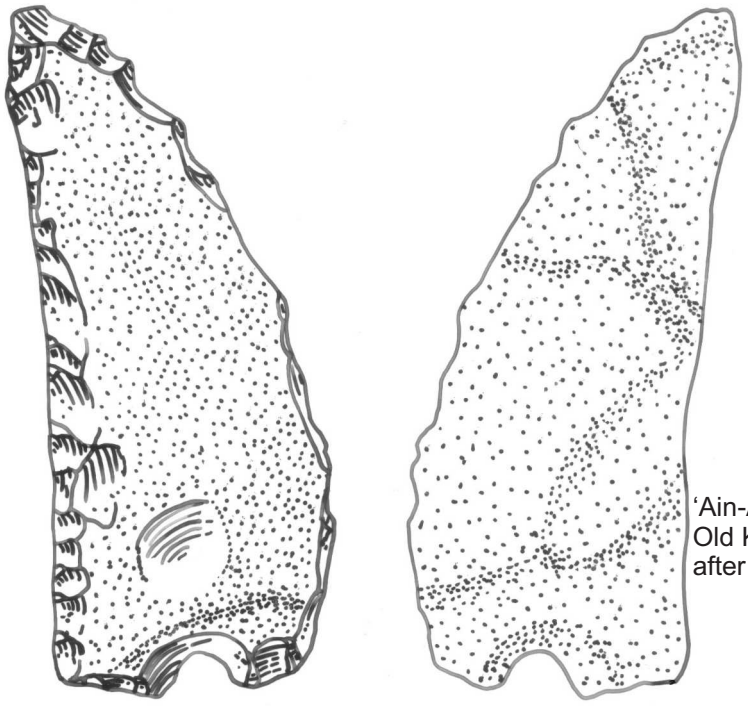
Actual Size

l-Fara'in - Buto,
after Schmidt 1989b fig.14.2

Old Kingdom Sickle Blades



'Ain-Asil, Old Kingdom-First Intermediate Period
after Midant-Reynes 1998, pl.13.1

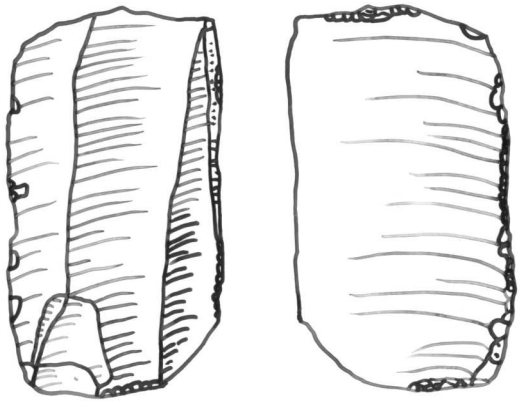


'Ain-Asil,
Old Kingdom-First Intermediate Period
after Midant-Reynes 1998, pl. 26.1

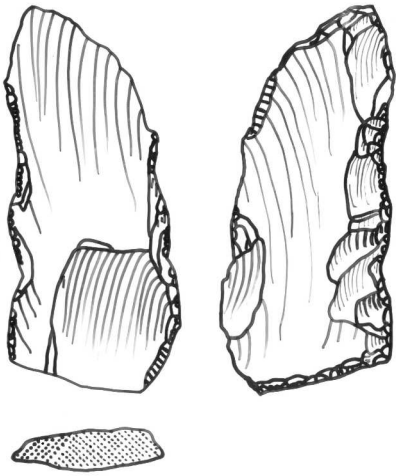
Actual Size

2nd Intermediate Period-
New Kingdom Sickle Blades

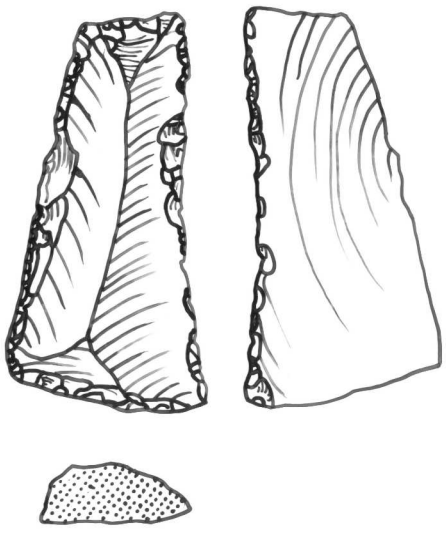
Plate 24



Tell el-Dab'a, 2nd Intermediate Period,
after Tillmann 2004, fig. 228, 4, (Type D)
(size unknown)



Tell el-Dab'a, 2nd Intermediate Period,
after Tillmann 2004, fig. 226.1, (Type A)
(size unknown)



Tell el-Dab'a, New Kingdom,
after Tillmann 2004, fig. 226.4 (Type B)
(size unknown)

Middle Kingdom Sickle Blades

Plate 25

1.

2.

3.

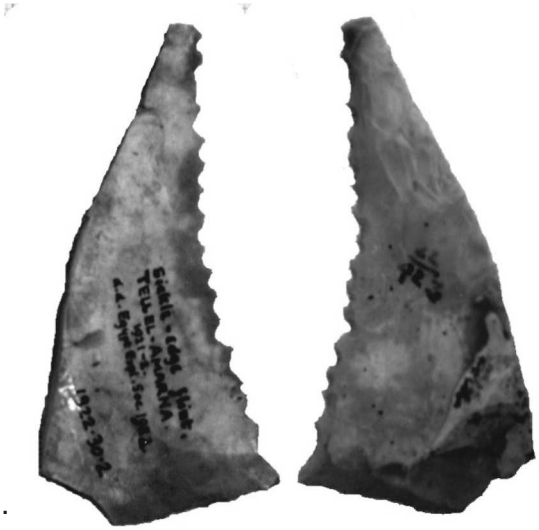
4.

Actual Size

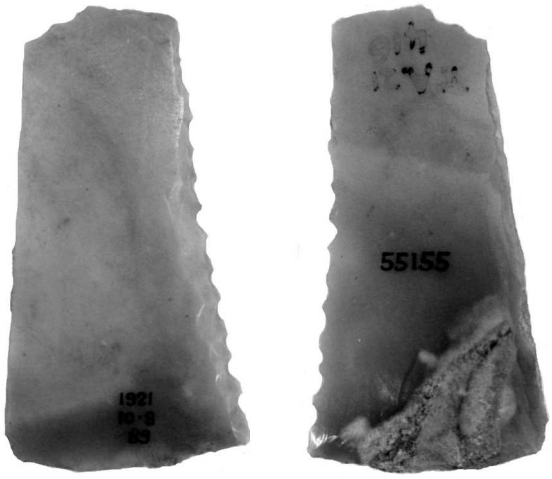
1. Lahun, UC7575v
2. Lahun, UC7575vii
3. Lahun, UC7527iii(1)
4. Lahun, UC7527iii(3)

New Kingdom Sickle Blades Plate 26

1.



2.

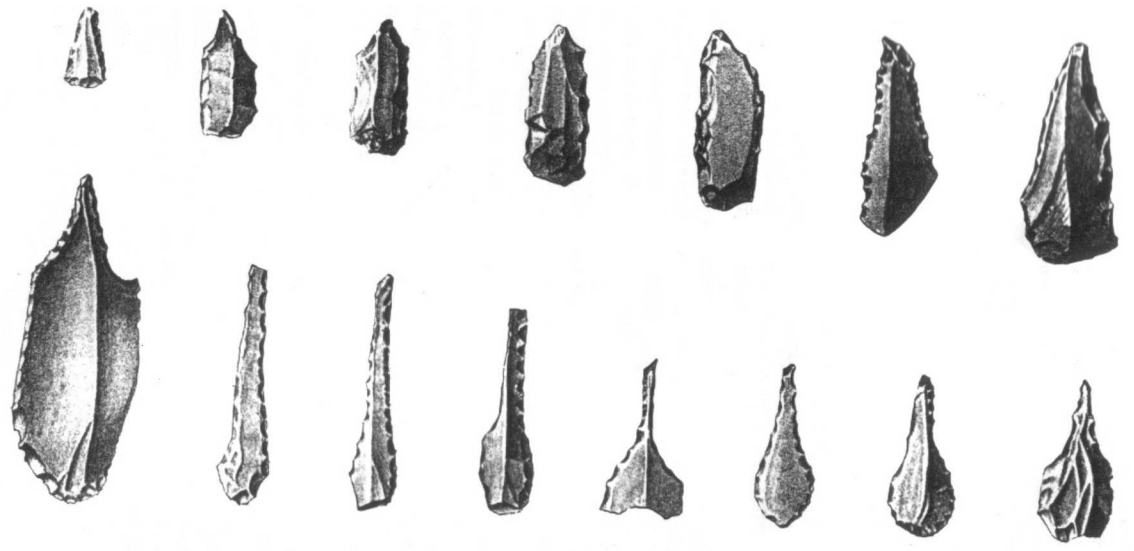


3.

Actual Size

1. 18th Dynasty Amarna BM EA55156
2. 18th Dynasty Amarna PR 1922.30.2
3. 18th Dynasty Amarna, BM EA55155

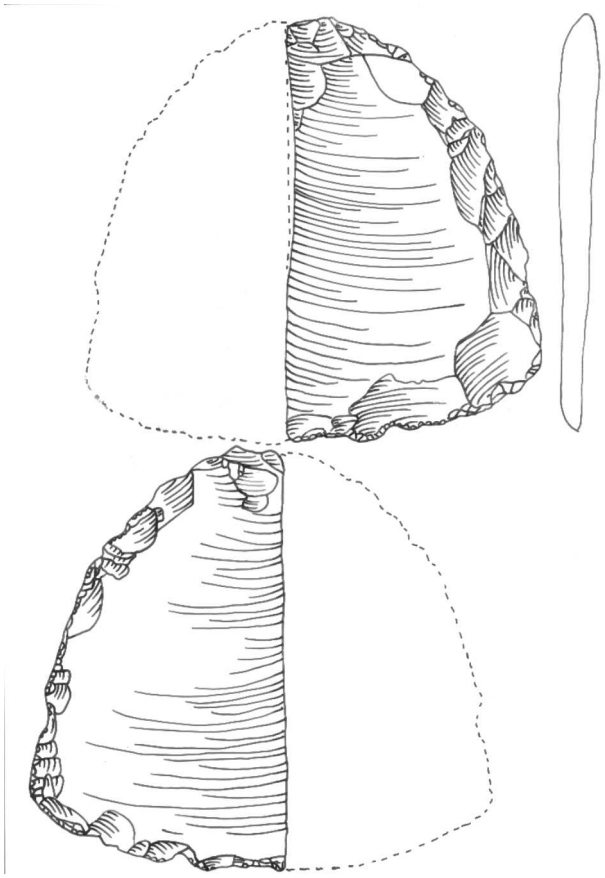
Microdrills Plate 27



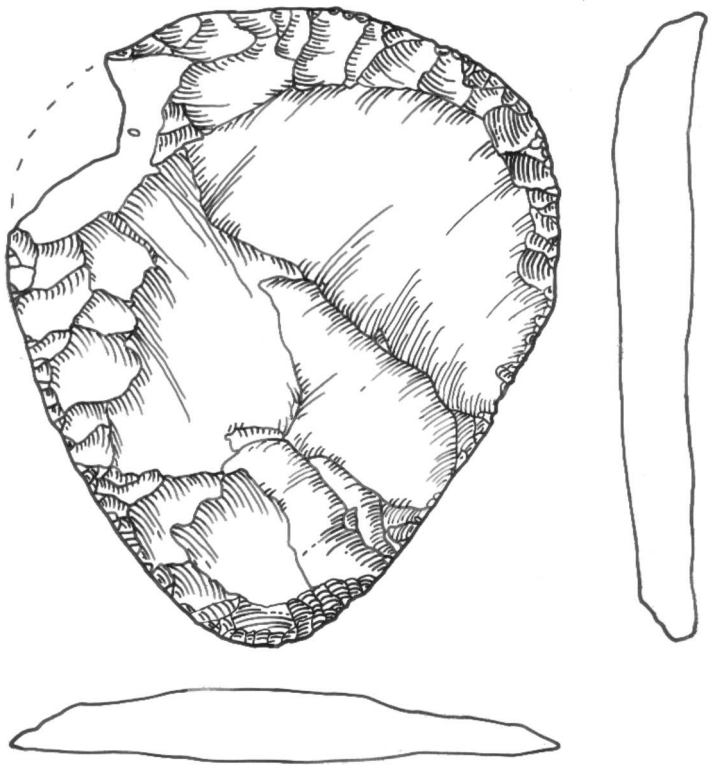
Abu Ghalib, Middle Kingdom
after Larsen 1935, fig. 19
(the largest is 37mm long)

Scrapers

Plate 28



Middle Kingdom, Tell el Dab'a,
after Tillmann 1992, pl. 67
(size not given)



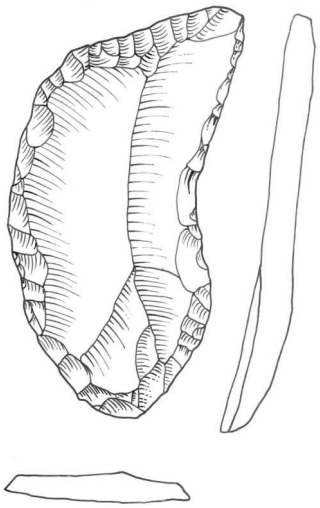
2nd-3rd Dynasty, Tell el Fara-in Buto
After Schmidt 1989b, fig. 15.7

Saqqara, 1st Dynasty tomb 3505
after Spencer 1980, pl. 78 v

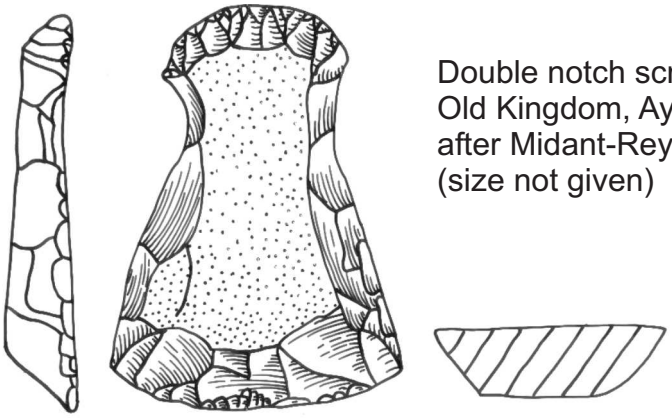
Actual size

Scrapers

Plate 29



Scraper made on thinning blade,
Helwan, mid-1st to mid-2nd Dynasty,
after Hikade 1999, fig. 2a; 2004, fig.3.52

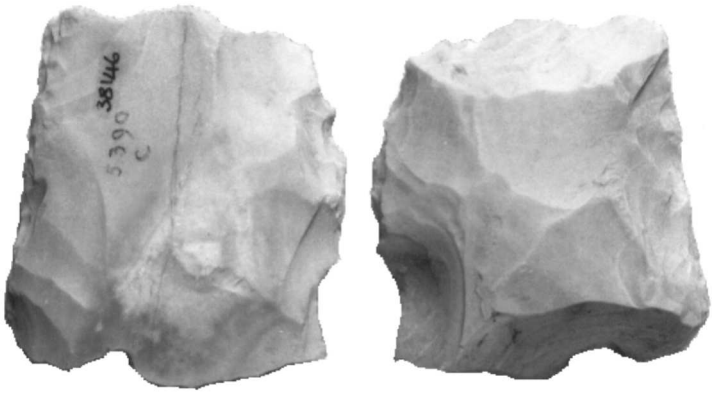


Double notch scraper
Old Kingdom, Ayn Aisil
after Midant-Reynes 1998, pl.24.3
(size not given)

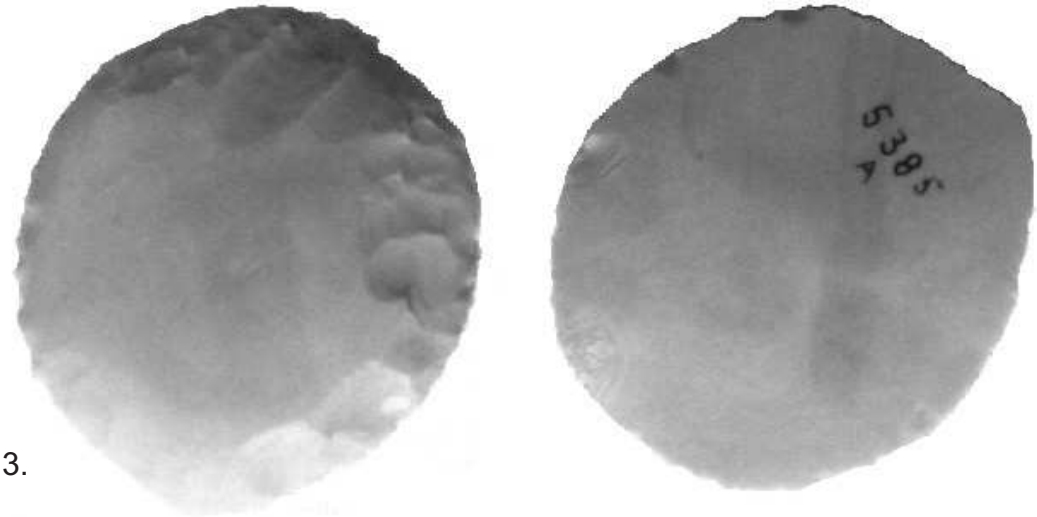
Actual size

Round and Sub-round Scrapers Plate 30

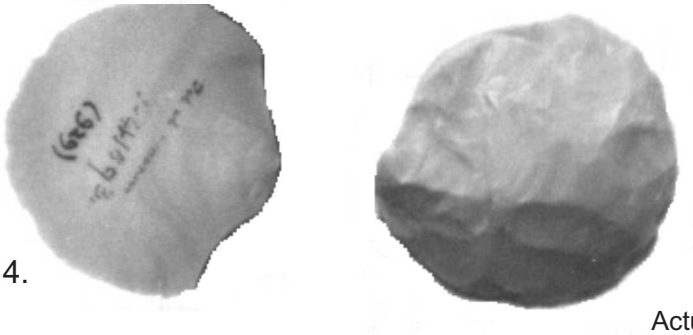
1.



2.



3.



4.

Actual size

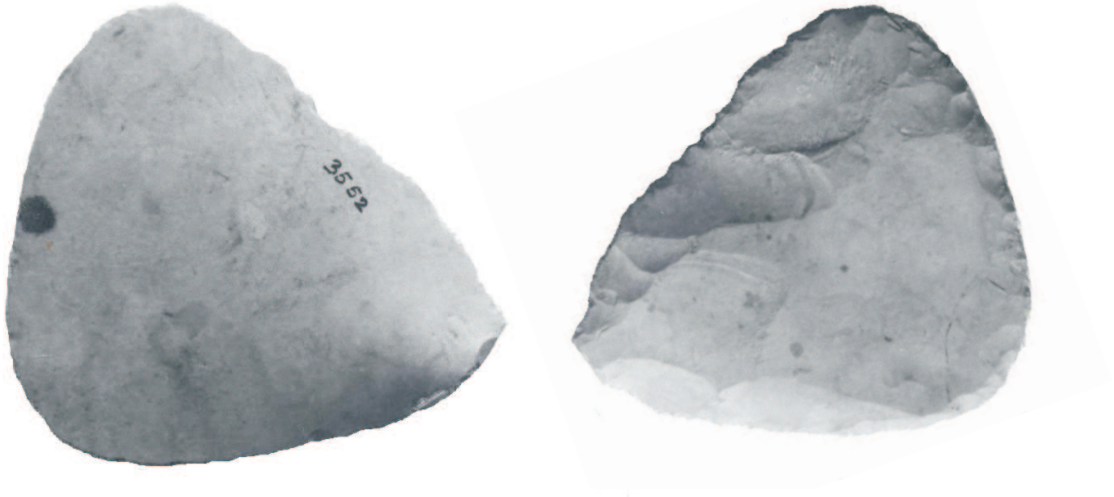
1. 1st Dynasty Giza, M4827
2. 1st Dynasty Abydos, M5390C
3. Early Dynastic Abydos, M5385A
4. 18th Dynasty Amarna, Ashmolean 1893.1-41.929

Triangular Scrapers

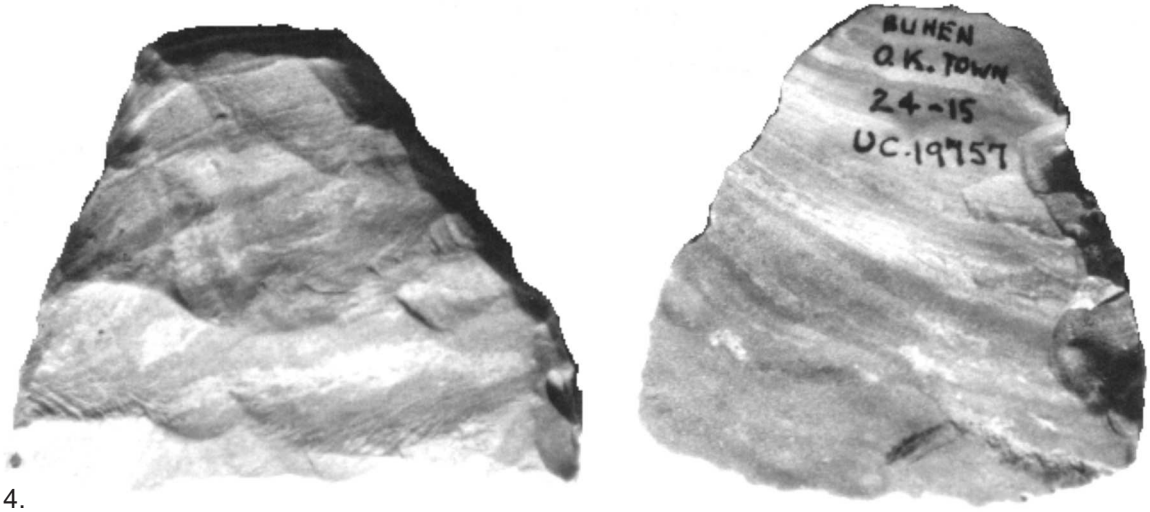
Plate 31

1.

2.



3.



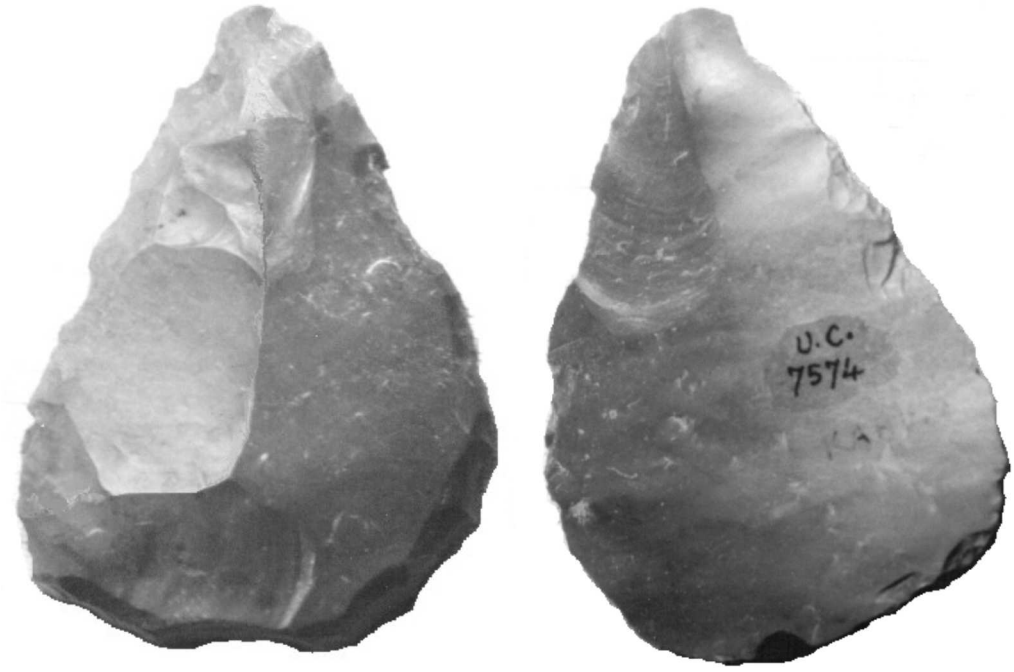
4.

1. 1st Dynasty Giza, M4826
2. 1st Dynasty Giza, M4822
3. 1st-2nd Dynasty Coptos, M3552
4. Old Kingdom Buhen, UC19757

Actual size

Triangular Scrapers

Plate 32

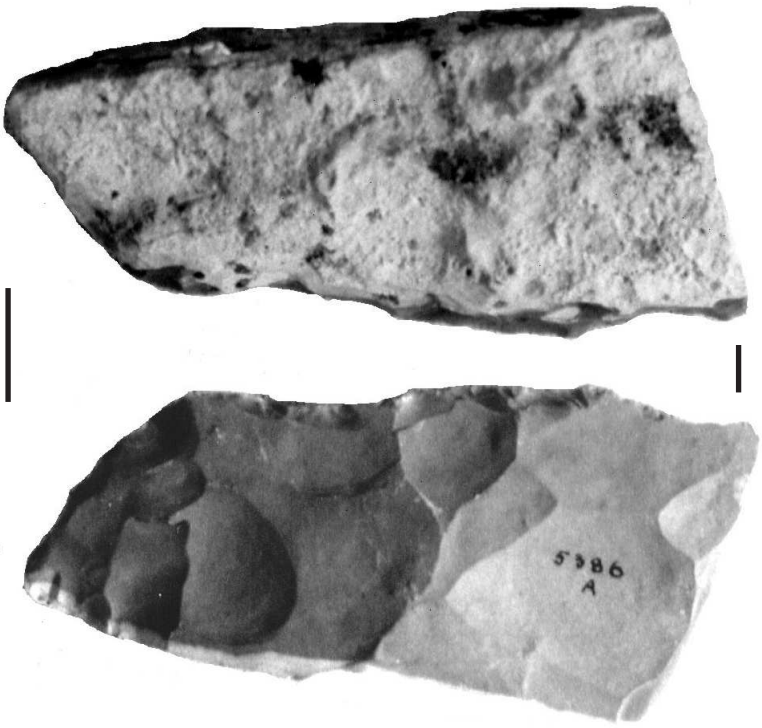


Lahun, ?Middle Kingdom
UC7574i

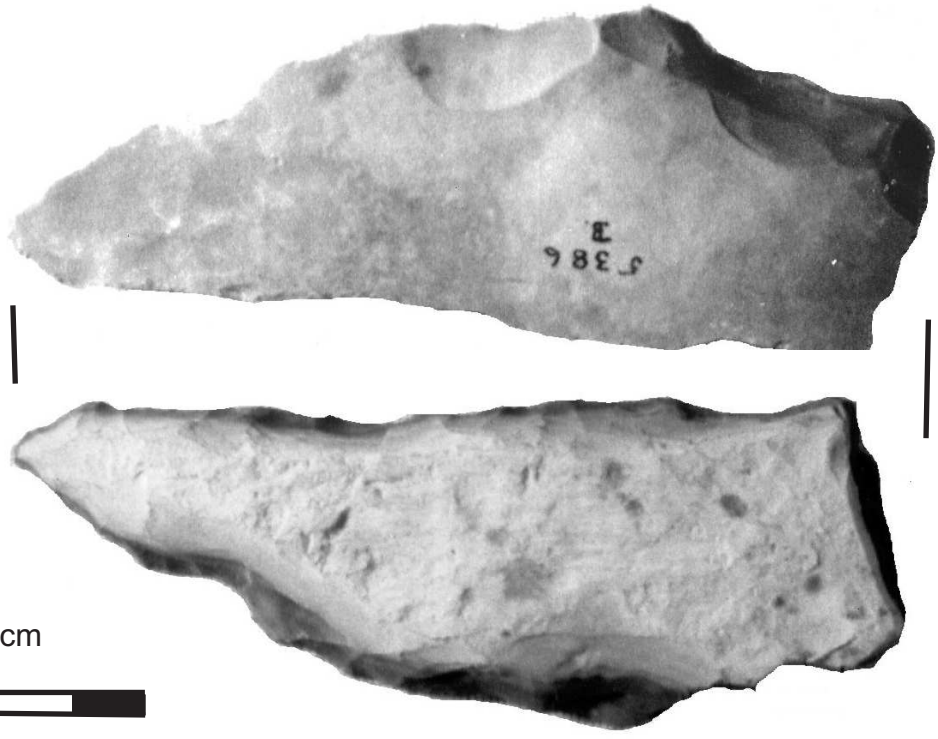
Actual size

Early Dynastic - Old Kingdom Knives Plate 33

Type 1



Abydos, 0-2nd Dynasty, M5386a



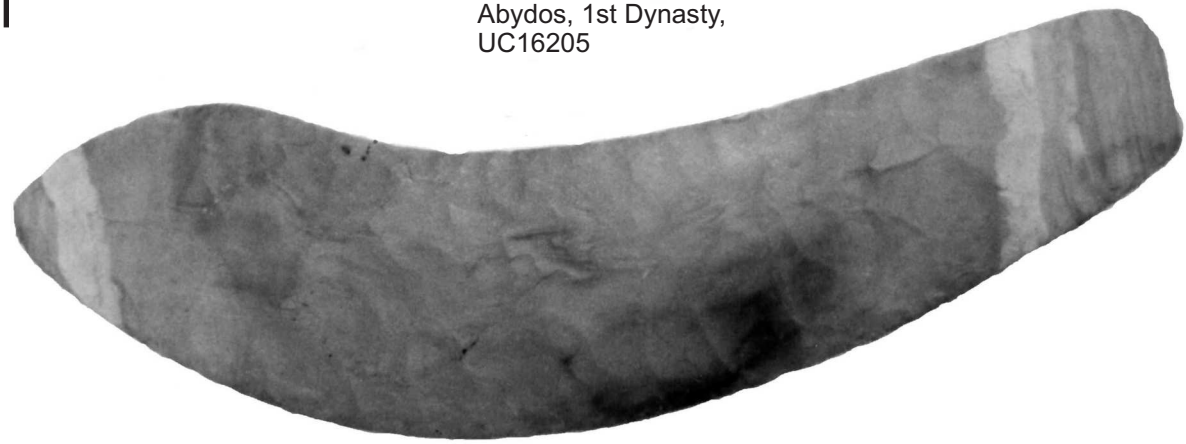
3cm

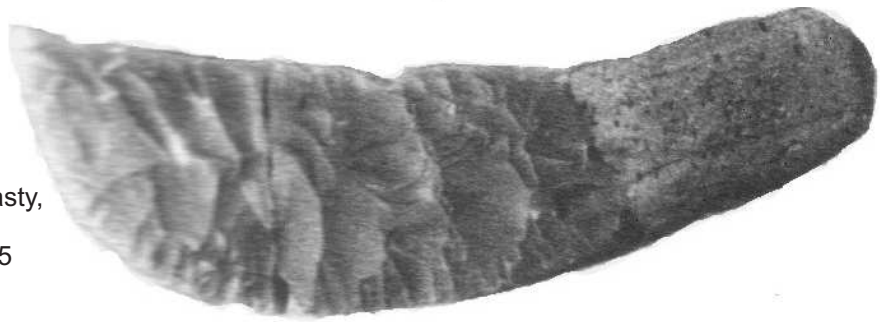
Abydos, 0-2nd Dynasty, M5386b

Early Dynastic - Old Kingdom Knives

Type 2

Abydos, 1st Dynasty,
UC16205



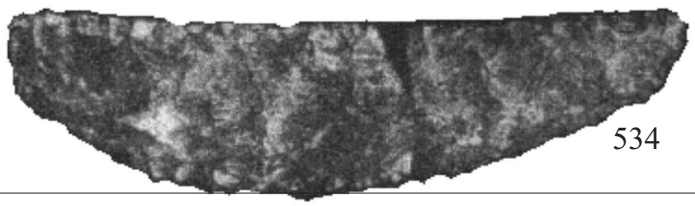


Abusir el-Meleq, 1st Dynasty,
Berlin 18999
after Scharff 1931, pl. 4.65

Type 3

Naqada, royal tomb, 1st Dynasty,
E5118

Giza, Menkaure Complex
late 4th Dynasty
after Reisner 1931, pl. 18
(size unknown)



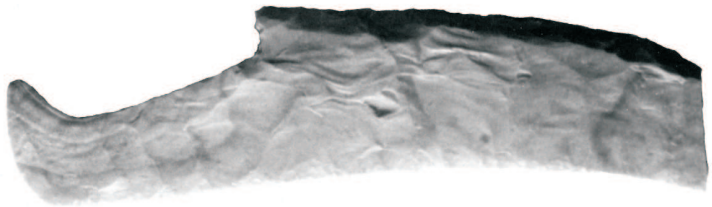
3cm

Early Dynastic - Old Kingdom Knives Plate 35

Type 4

Abydos, 1st Dynasty Tomb of Djer
Ipswich Museum IPSMG:R.1922.55.3

Abydos, 1st Dynasty
M6773

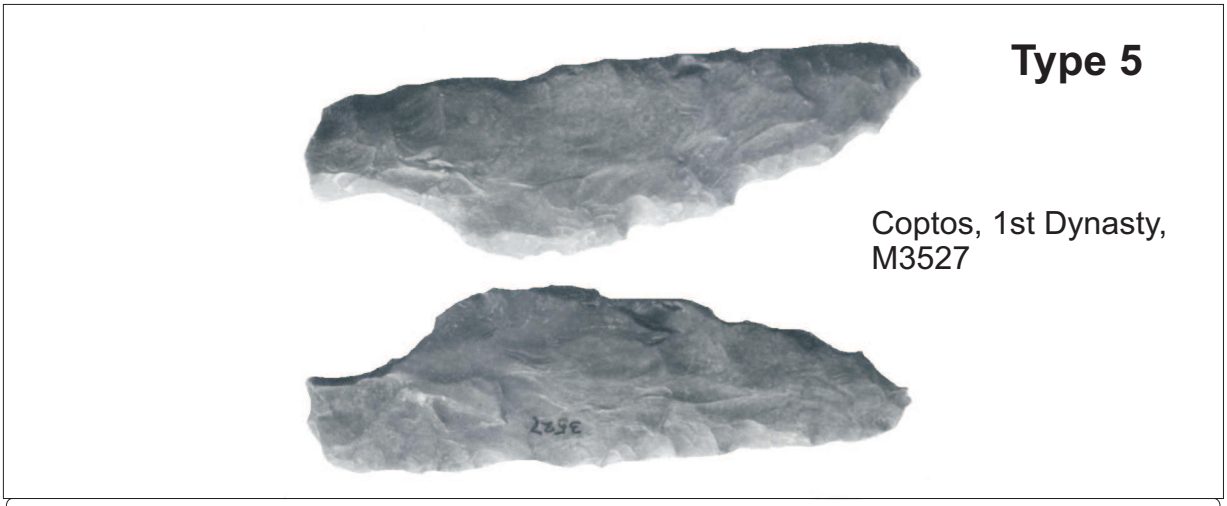


Abydos, 1st Dynasty,
M6774

Abydos, 1st Dynasty,
UC16216

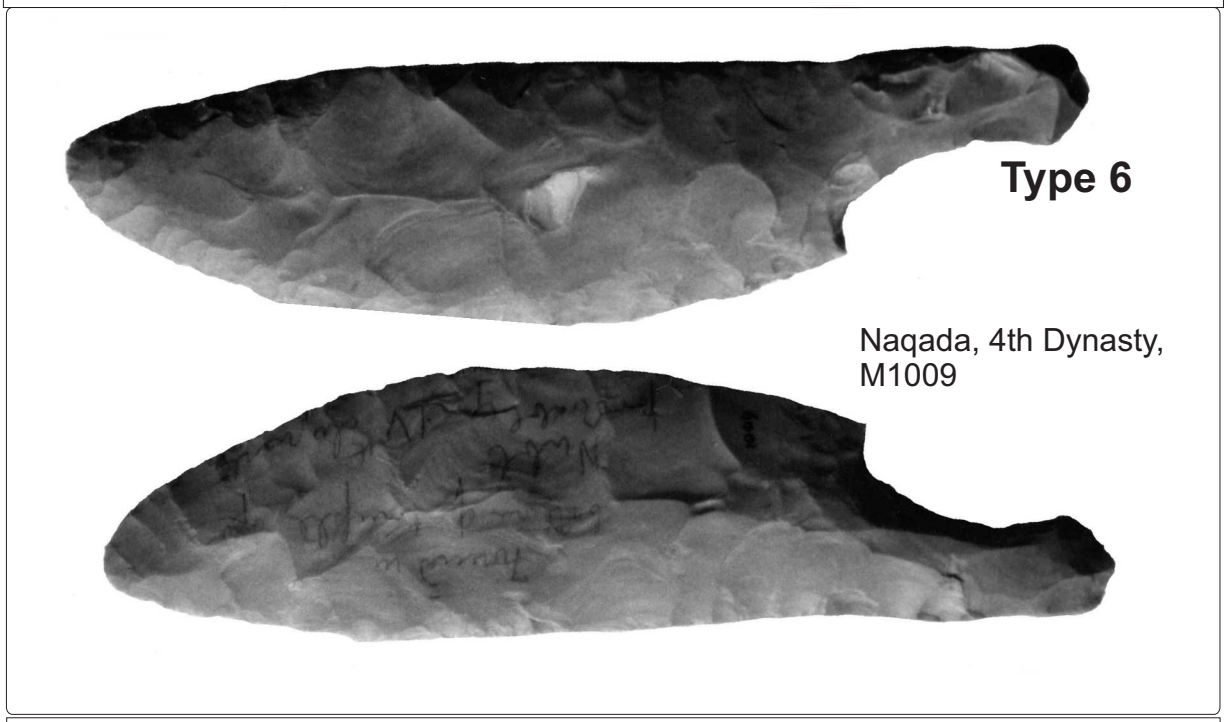
3cm

Early Dynastic - Old Kingdom Knives



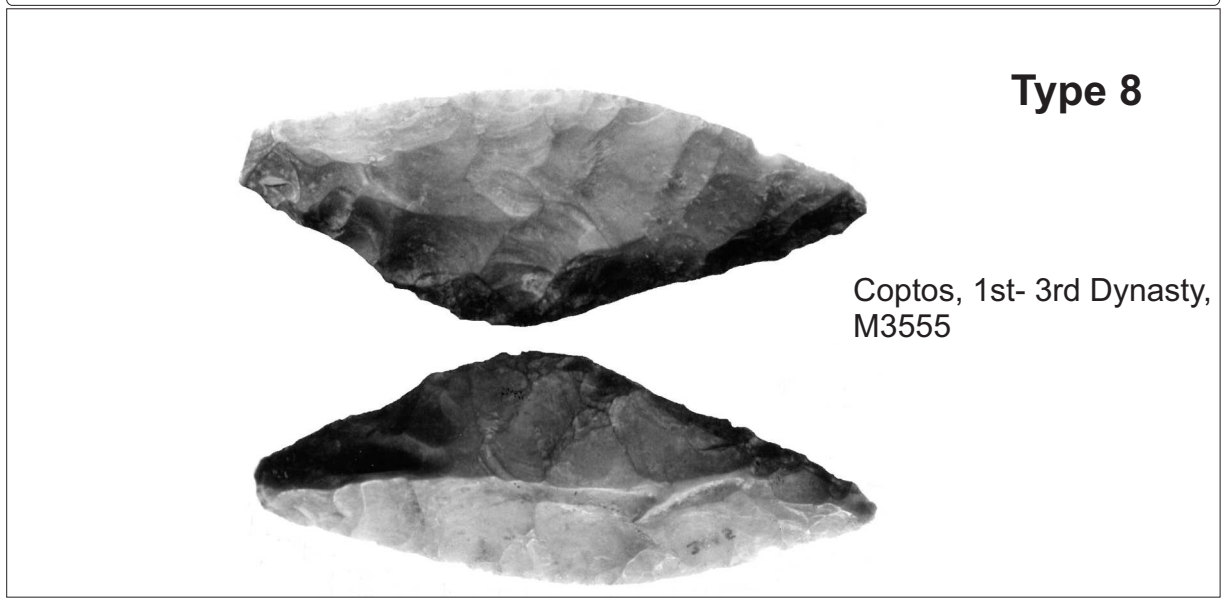
Type 5

Coptos, 1st Dynasty,
M3527



Type 6

Naqada, 4th Dynasty,
M1009



Type 8

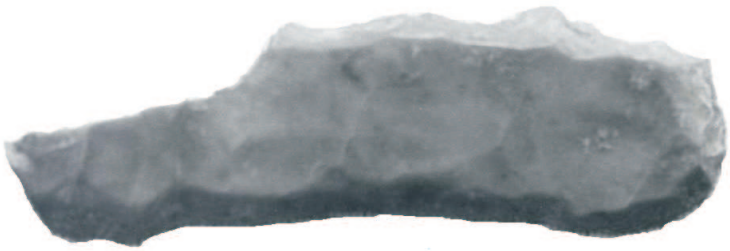
Coptos, 1st- 3rd Dynasty,
M3555

3cm

Early Dynastic - Old Kingdom Knives
Anomalies Plate 37

Abydos, 0-2nd Dynasty,
M5383A

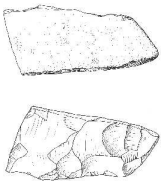
Coptos, 1st Dynasty,
M3572



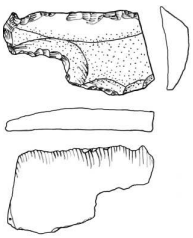
Early Dynastic - Old Kingdom Knives

Plate 38

Type 1

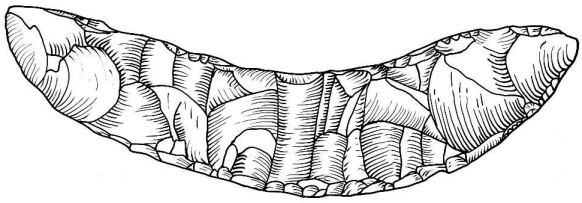


Abydos, Early Dynastic,
M5386A



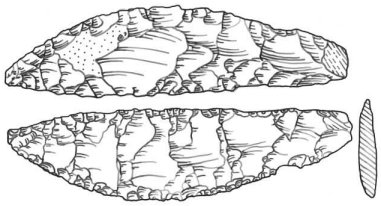
Helwan, Early Dynastic, 1st Dynasty
after Hikade 2005, pl.42.4

Type 2



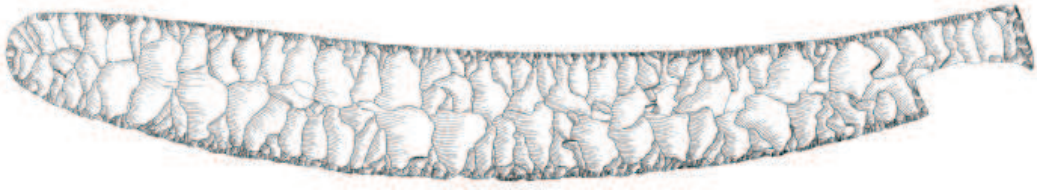
Giza, 1st-4th Dynasty,
after Kromer 1978, fig.11

Type 3

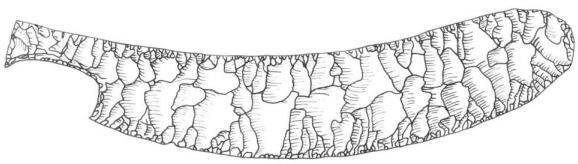


Abusir, the pyramid complex of Raneferef
5th Dynasty
after Svoboda 2006, fig.2.11.4

Type 4



Abydos, 1st-2nd Dynasty,
after Hikade 1997, fig.1

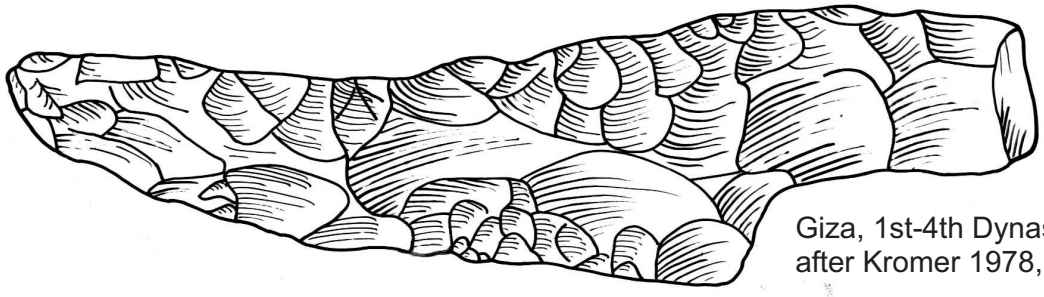


Helwan, 2nd Dynasty,
after Hikade 1999, fig.4

5cm

Early Dynastic - Old Kingdom Knives

Type 5



Giza, 1st-4th Dynasty,
after Kromer 1978, pl.2

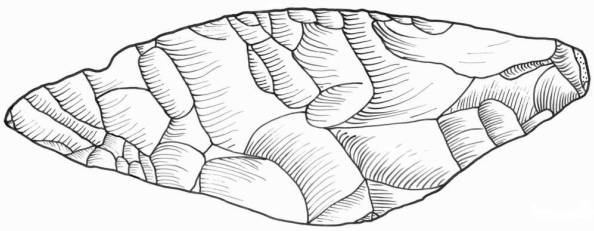
Type 6

Naqada, 4th Dynasty
M1009

Type 7

Tell Ibrahim Awad, Old Kingdom,
after Schmidt 1992, fig.10.54
(size unknown)

Type 8

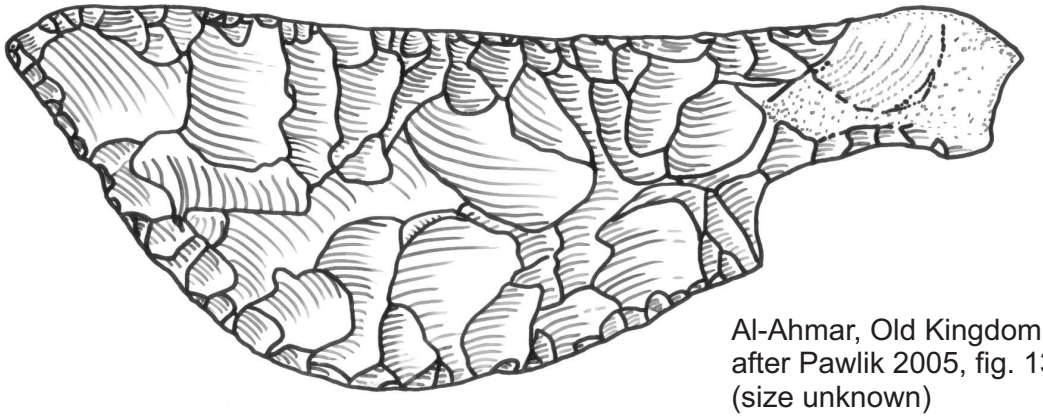


Coptos, 1st-3rd Dynasty,
M3555

3cm

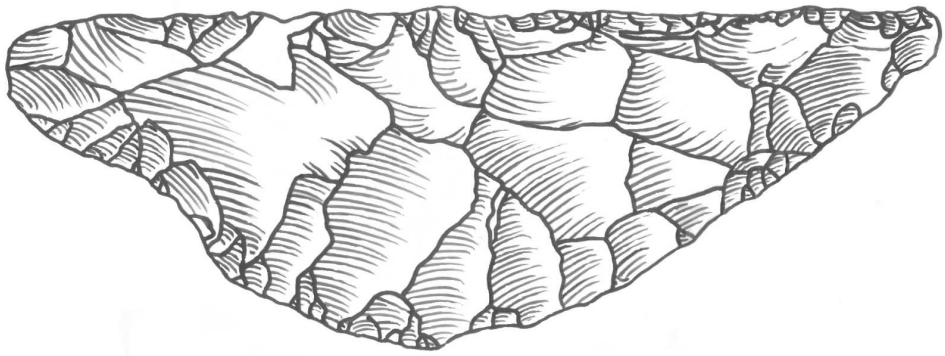
Early Dynastic - Old Kingdom Knives Plate 40

Type 9



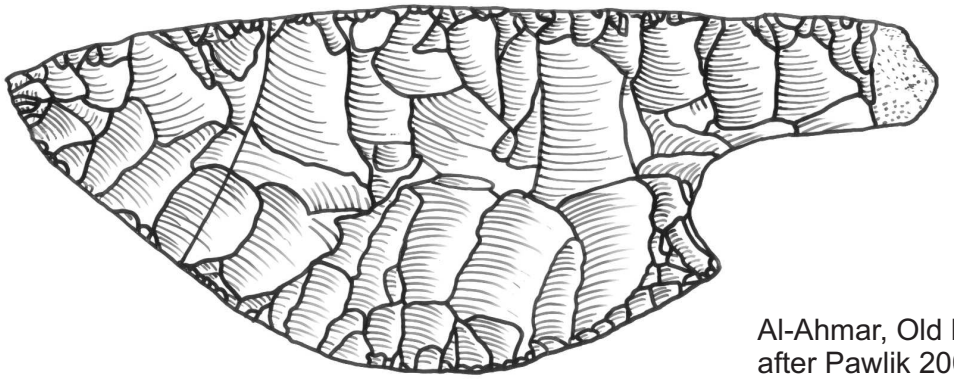
Al-Ahmar, Old Kingdom,
after Pawlik 2005, fig. 13
(size unknown)

Type 9A



Tell Ibrahim Awad, Early Dynastic-Old Kingdom
after Schmidt 1992, fig. 9.52
(size unknown)

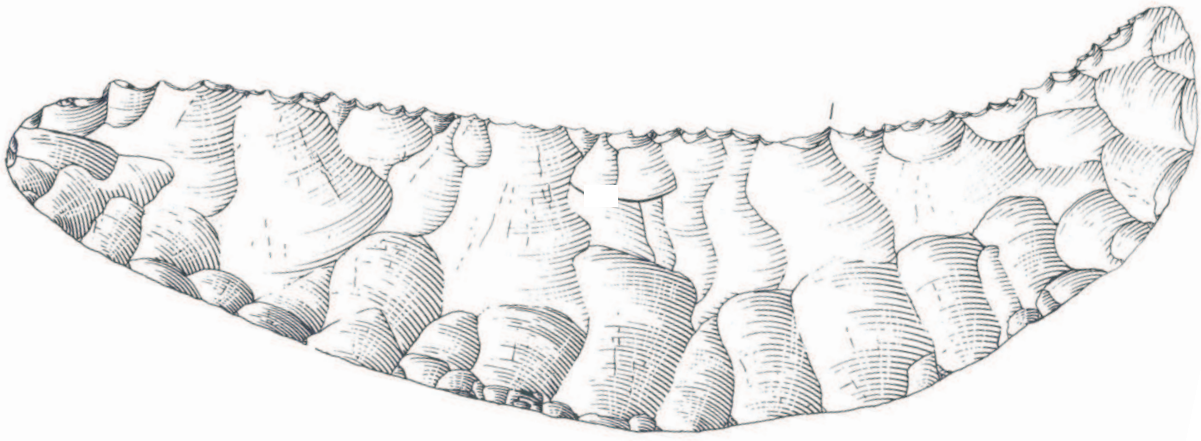
Type 10



Al-Ahmar, Old Kingdom,
after Pawlik 2005, fig.14
(size unknown)

Knife Sickle

Plate 41



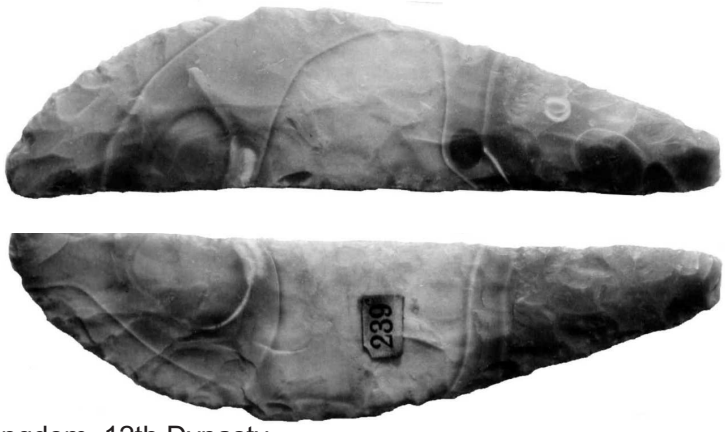
Ayn-Asil, Old Kingdom-1st Intermediate Period knife sickle,
after Midant-Reynes 1998, pl.37

First Intermediate Period - Middle Kingdom Knives

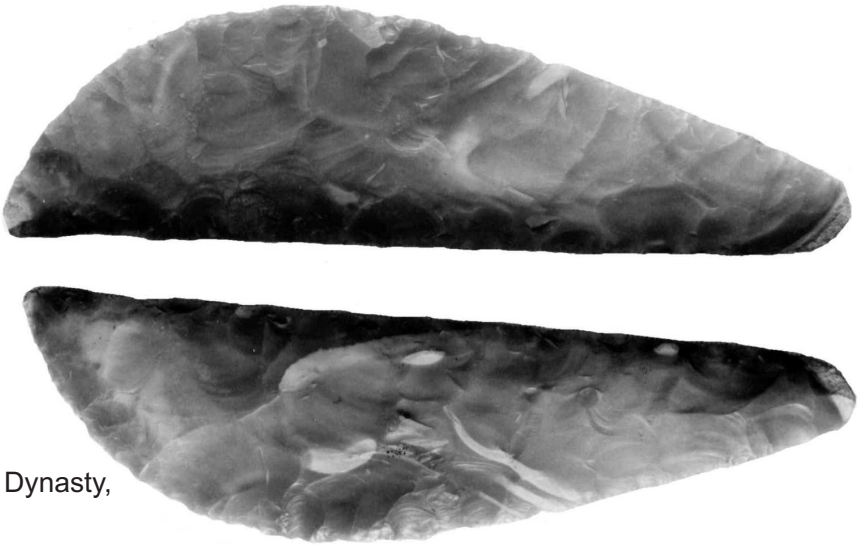
Plate 42

Type 1

Lahun, Middle Kingdom, BM EA67619



Lahun, Middle Kingdom, 12th Dynasty, M239c

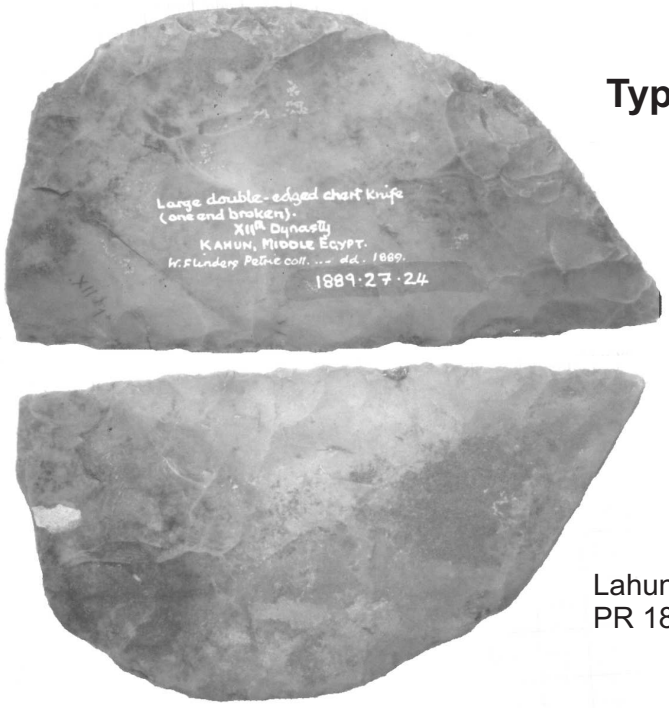


Lahun, 12th Dynasty, M239b

1cm

First Intermediate Period - Middle Kingdom Knives

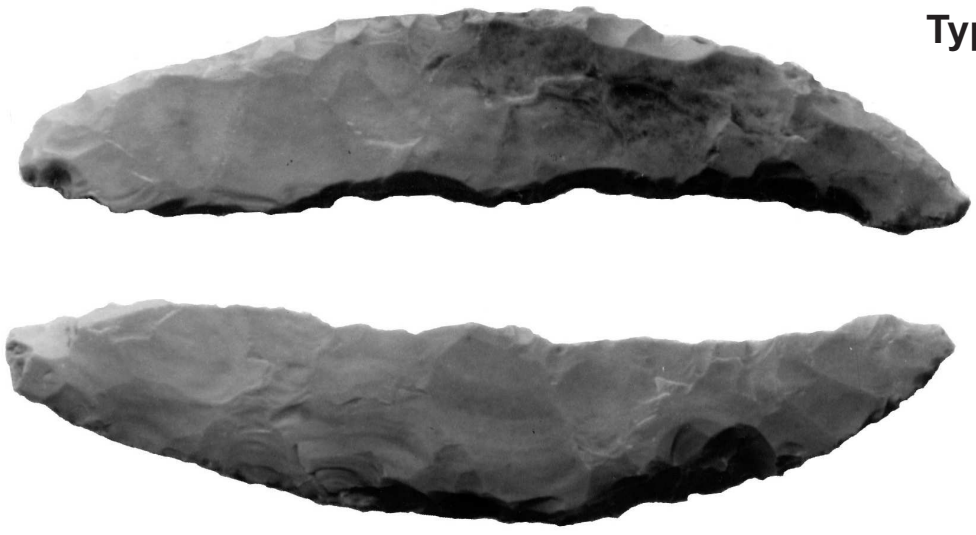
Plate 43



Type 1

Lahun, 12th Dynasty
PR 1889.27.24

Type 2



Lahun, 12th Dynasty,
M241

Lahun, Middle Kingdom,
BM EA67620

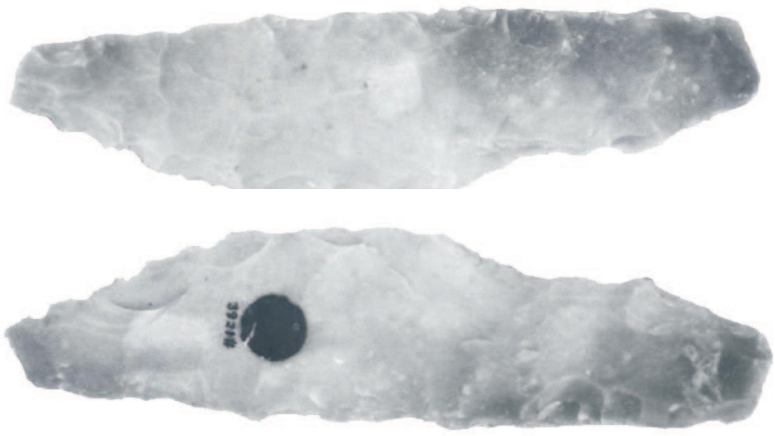
1cm

First Intermediate Period - Middle Kingdom Knives

Plate 44

Type 3

Lahun, 12th Dynasty,
UC7568



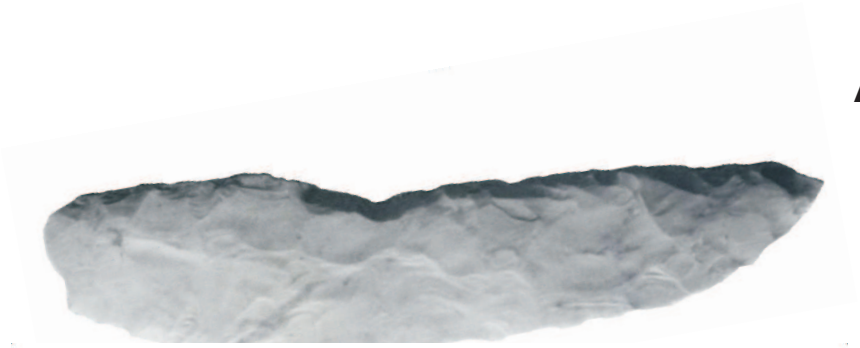
Lahun, 12th Dynasty,
M38214

1cm

First Intermediate Period - Middle Kingdom Knives

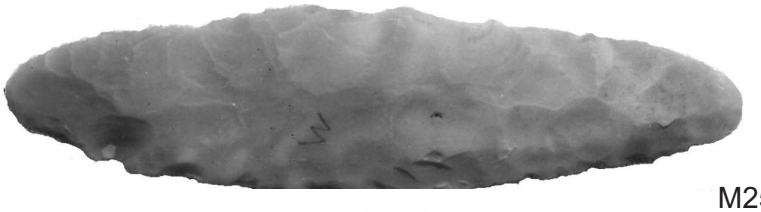
Plate 45

Anomalies



Lahun, 12th Dynasty,
M250v

Lahun, 12th Dynasty,
M38213

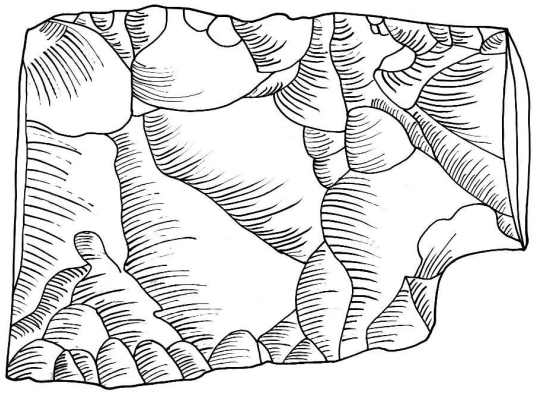


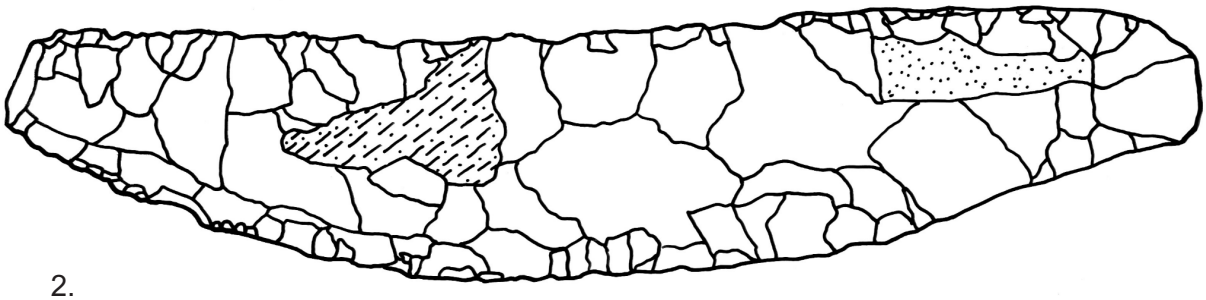
M250ii
Lahun, Middle Kingdom

1cm

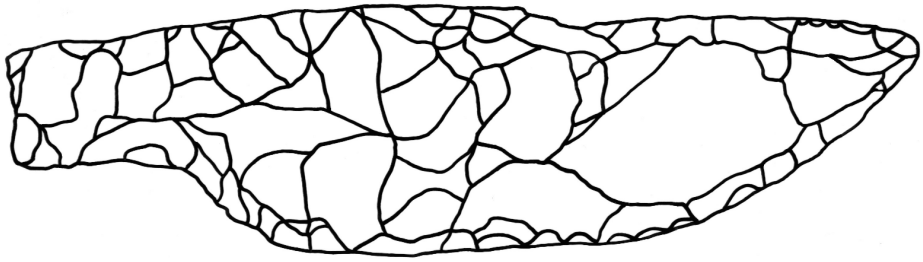
New Kingdom and Later Knives Plate 46

1.





2.



3.

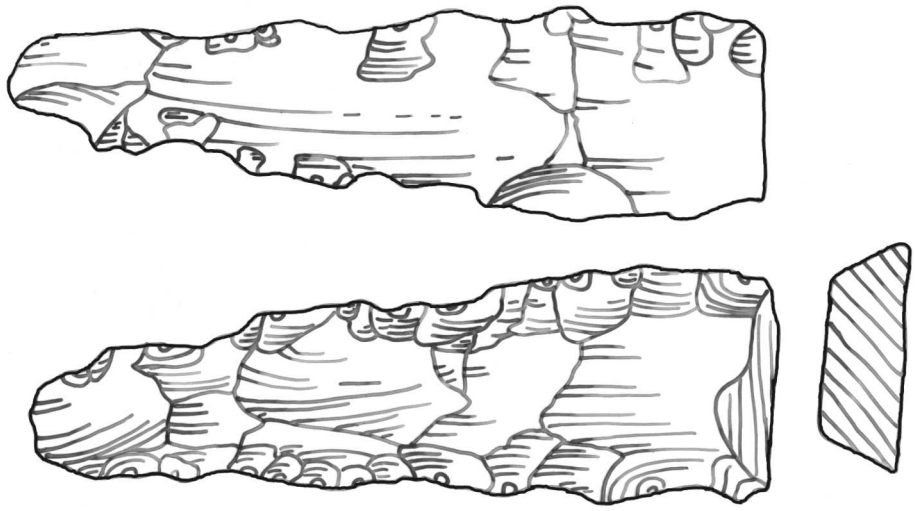
1. Memphis, mid 18th Dynasty, (after Giddy 1999, pl. 52.1927);
2. Akhenaten Temple Complex, East Karnak, New Kingdom, (after Miller 1985, fig. 2);
3. El-Ashmunein town site, Third Intermediate Period, (after Spencer 1993, pl. 27).

3 cm

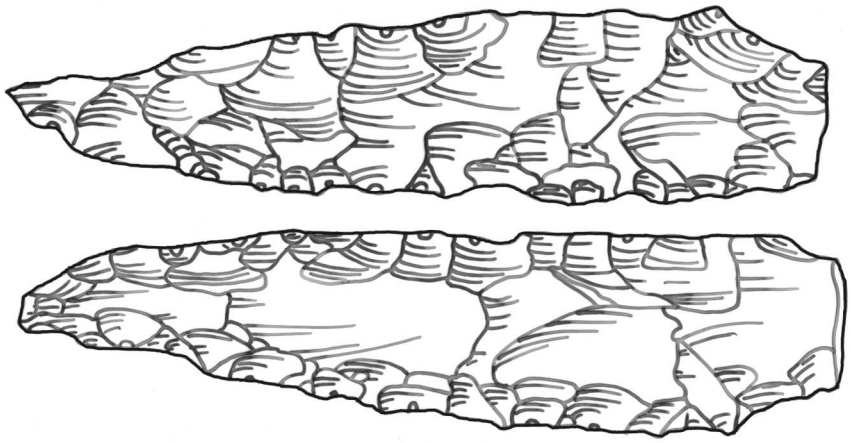
Ramesseum ?19th Dynasty, PR1896.53.2.1and 2

3 cm

Bifaces- Cut-down Knives? Plate 48



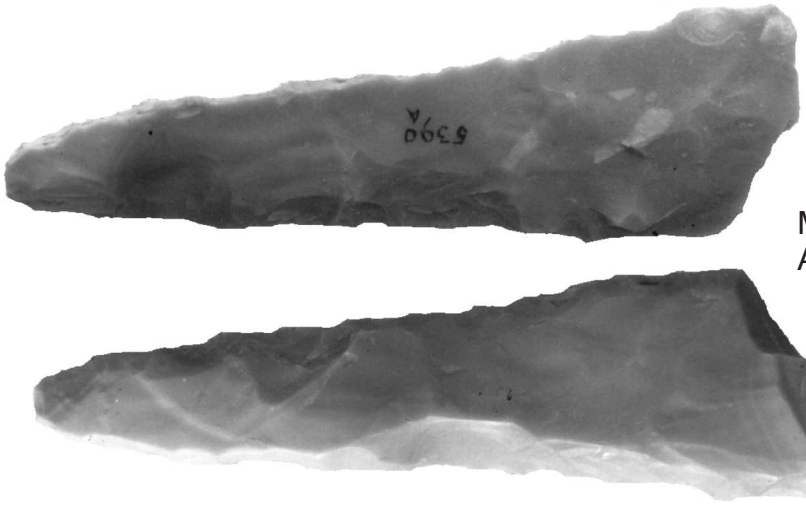
Abusir, Pyramid Complex of Raneferef,
5th Dynasty
after Svoboda 2006, fig.2.11.8



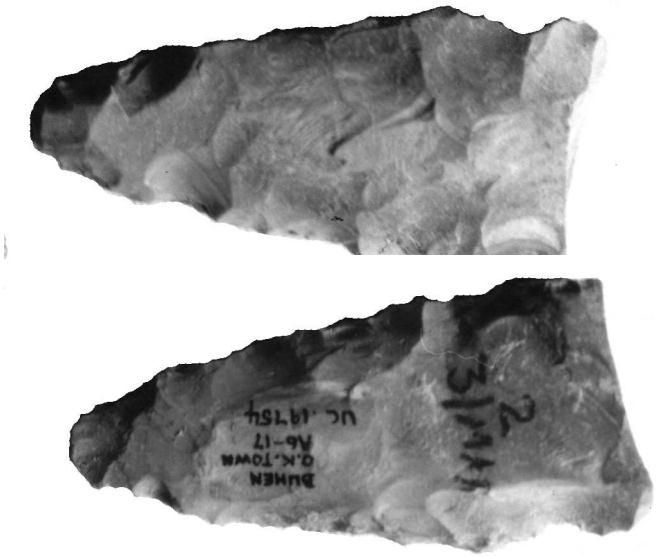
Abusir, Pyramid Complex of Raneferef,
5th Dynasty
after Svoboda 2006, fig.2.11.8

Approximately actual size.

Bifaces Cut-down Knives? Plate 49



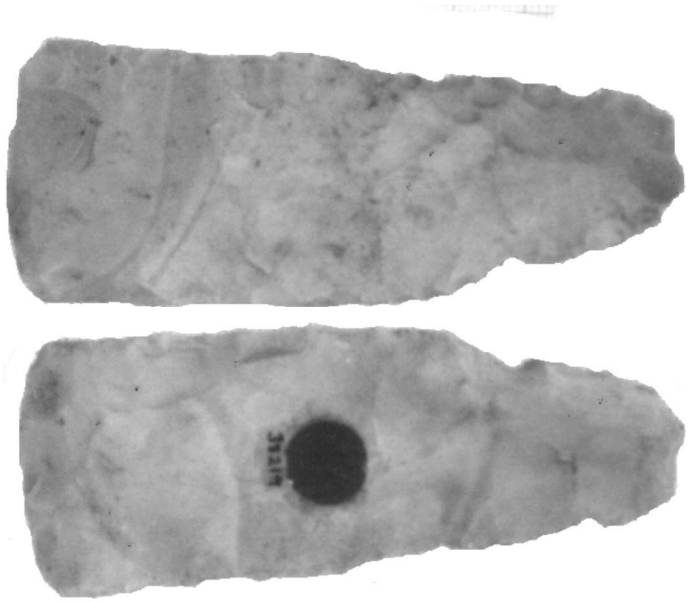
M5390
Abydos, Middle Kingdom



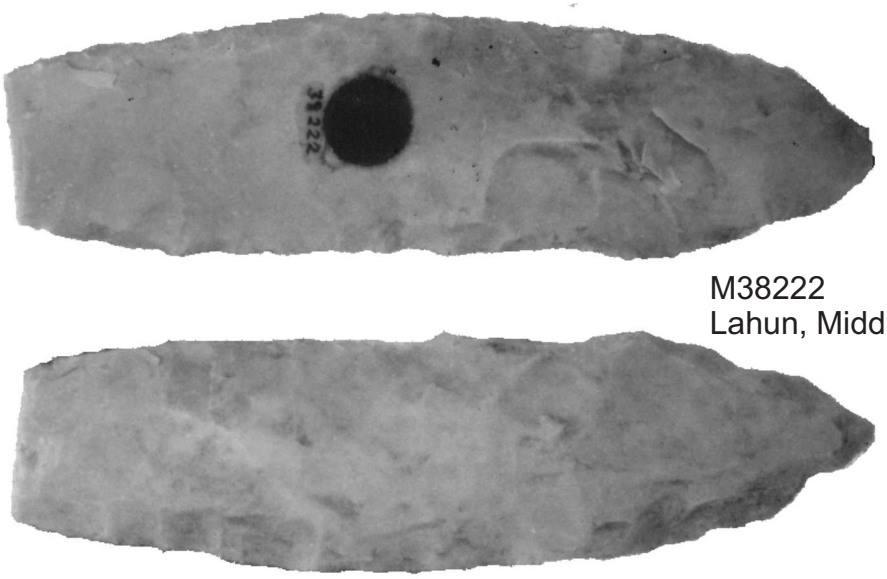
UC19754
Buhen, Old Kingdom

Actual size

Biface - Cut-down Knives? Plate 50



M38219
Lahun, Middle Kingdom

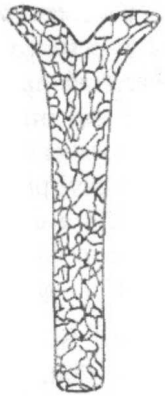


M38222
Lahun, Middle Kingdom

Actual size

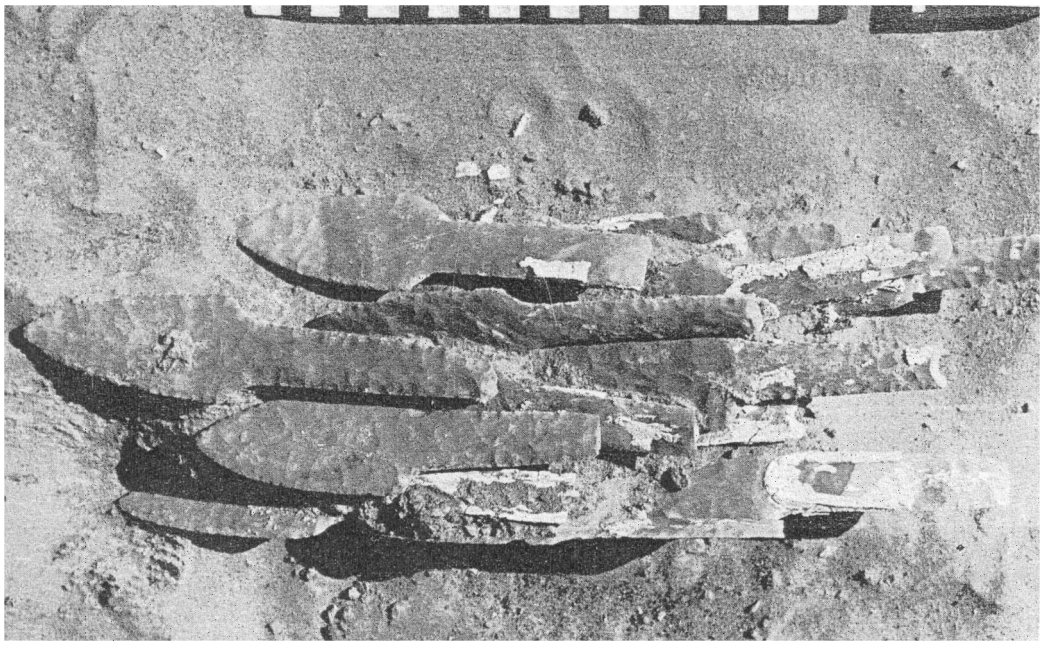
Pesesh-kef

Plate 51

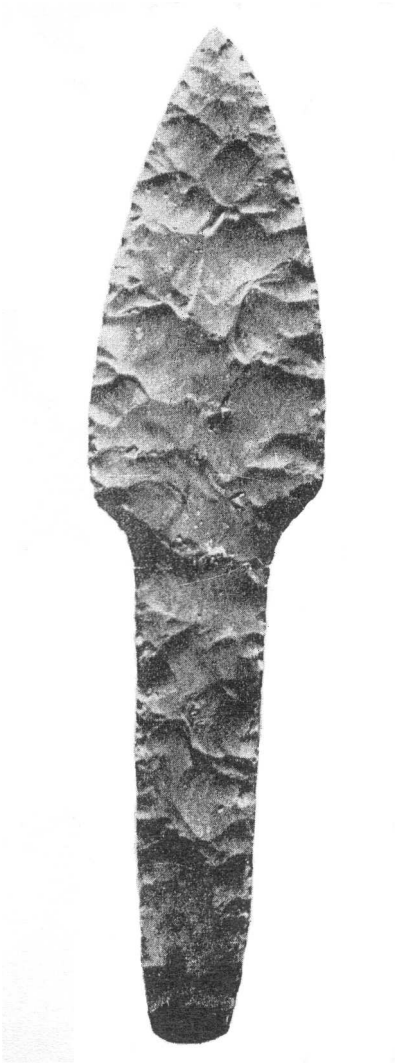


After van Walsem 1978

Spears/Javelines/Pikes Plate 52



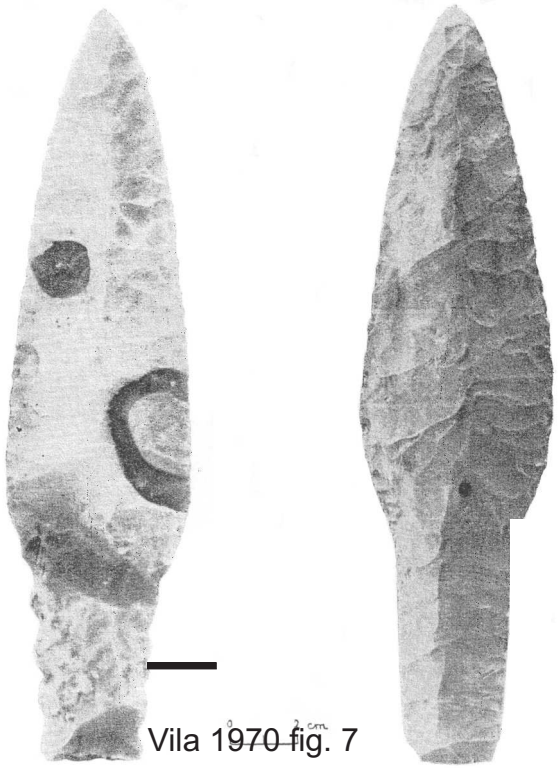
Vila 1970, pl. 12a



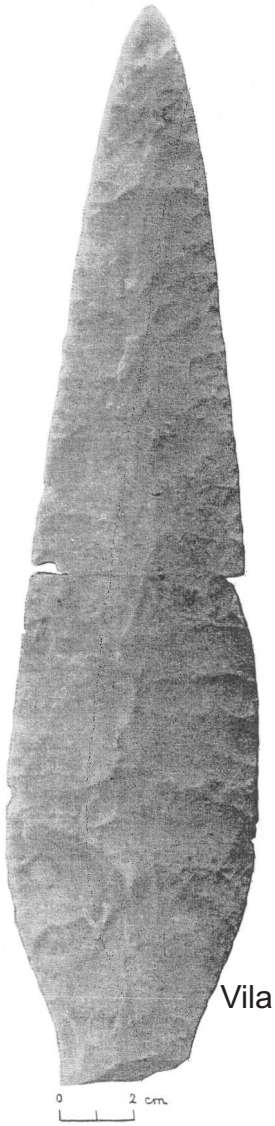
Vila 1970 pl. 11b

Spears/Javelines/Pikes

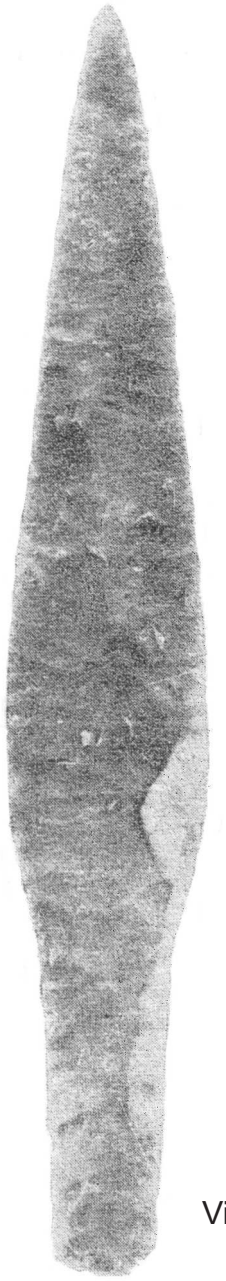
Plate 53



Vila 1970 fig. 7



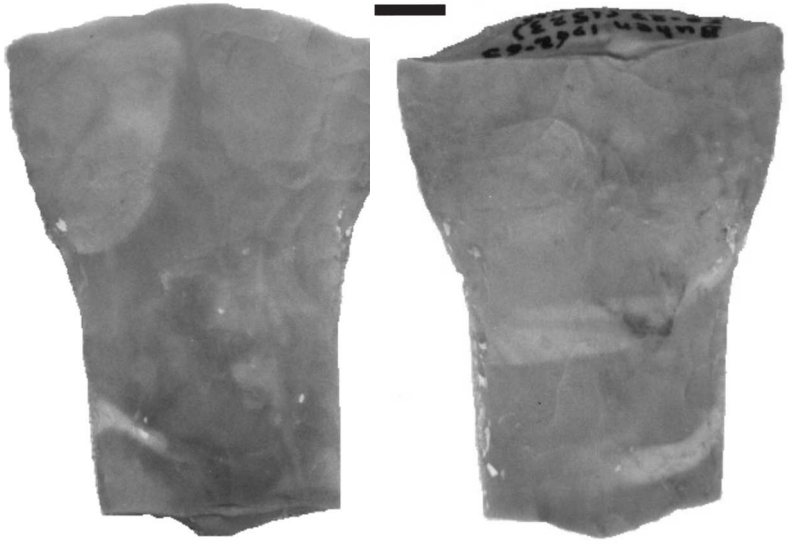
Vila 1970, fig 6



Vila 1970, fig.5

Buhen, Emery *et al.* 1979, pl. 120
(length 22.6cm)

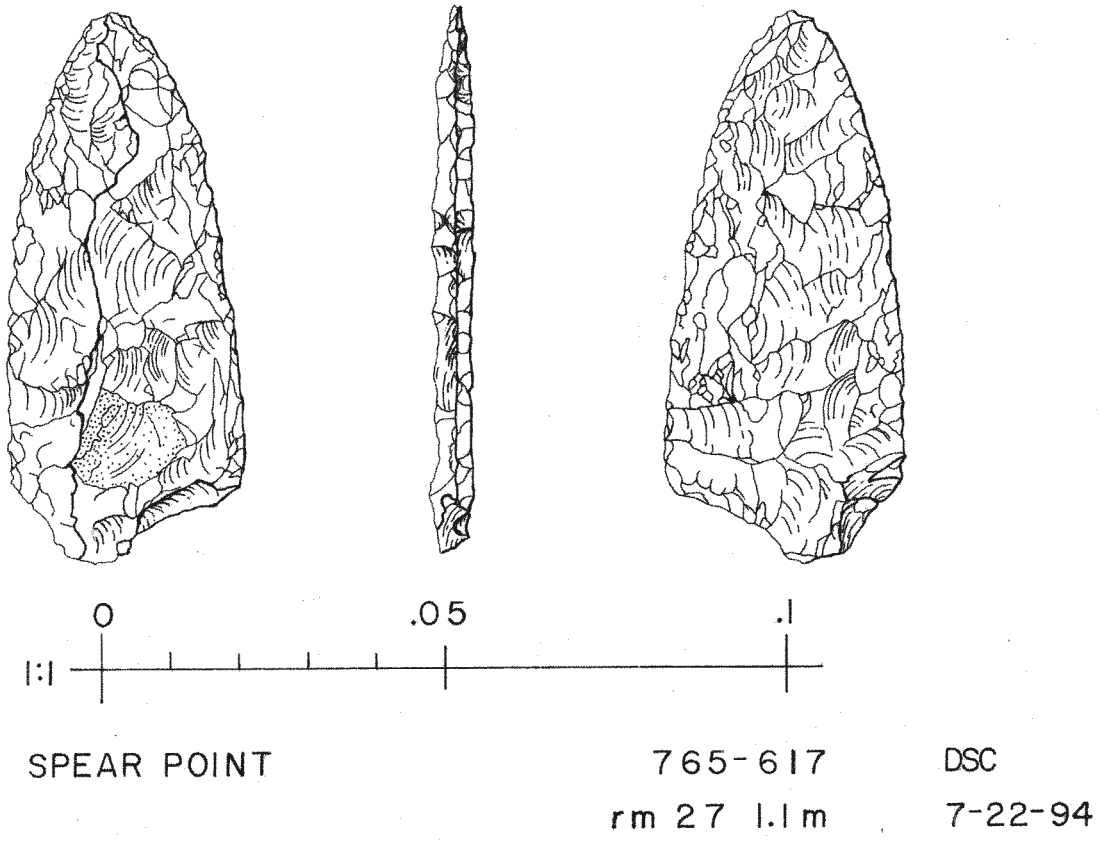
1cm



554

Birmingham 513.1965

Spears/Javelines/Lanceheads Plate 55



Lance head from Askut, New Kingdom
courtesy of Tyson-Smith

Arrowheads

Plate 56

Rock crystal arrowhead
Abydos, tomb of Djer, 1st Dynasty,
PR1901.40.21
39.5mm long

Double arrowhead
Abydos, Tomb of Djer, 1st Dynasty
Berlin 18088,
after Scharff 1931, pl. 9.196
(size unknown)

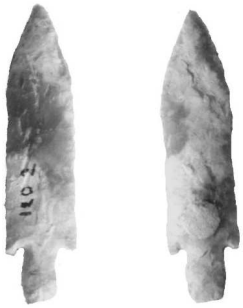
PR1901.40.3

PR1901.40.2

Arrow-heads from Abydos, 1st Dynasty

PR1901.40.4

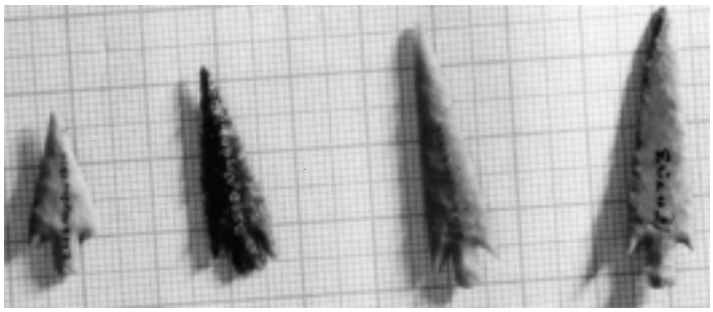
Actual size



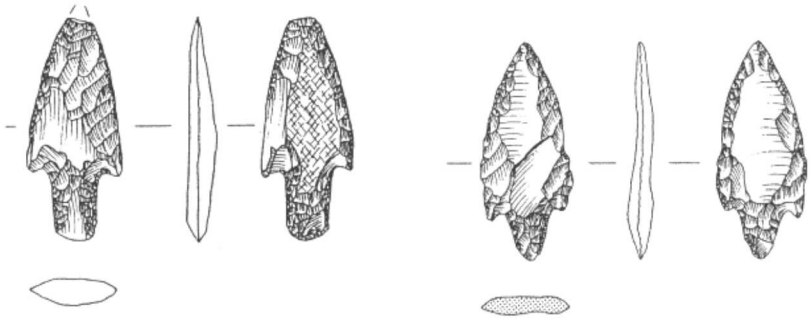
M1202

New Kingdom Arrowheads

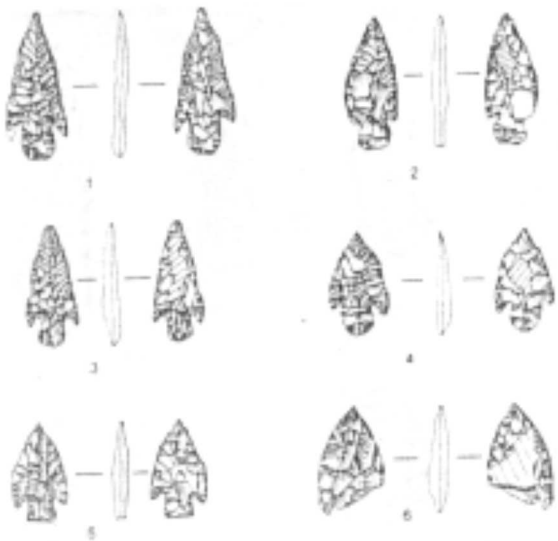
Plate 57



Abydos Tomb D.29, 18th Dynasty
Ashmolean 1896-1908 E2703



‘Ezbet Helmi, Tell el Dab’a, 18th Dynasty
Tillmann 1994, 108



19th Dynasty Qantir
Tillmann, 1992, fig. 25
(sizes not given)

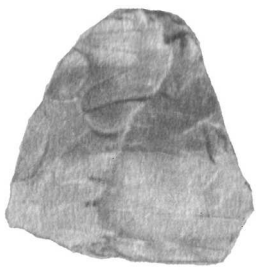
Axes: Early Dynastic-Old Kingdom Plate 58

Type 1

Lahun, 12th Dynasty,
BM EA67735

Coptos, Early Dynastic
M3546

Type 2



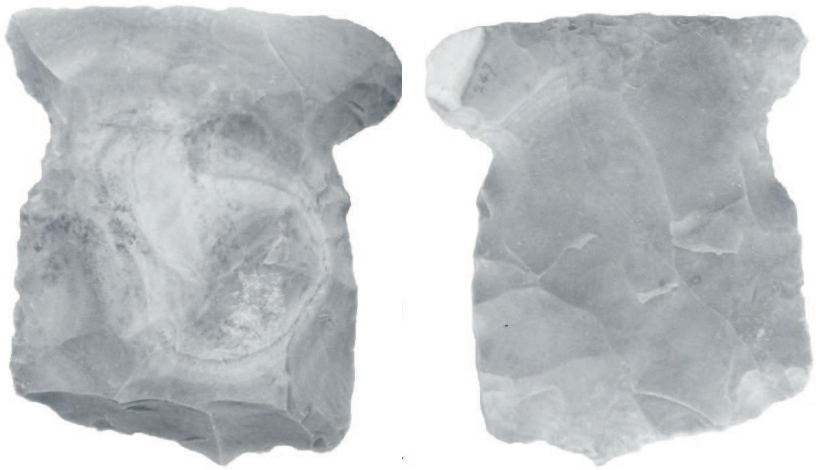
Berlin 16067
Abydos, 1st Dynasty,
after Scharff 1931, pl. 3.45

3cm

Axes: Middle Kingdom

Plate 59

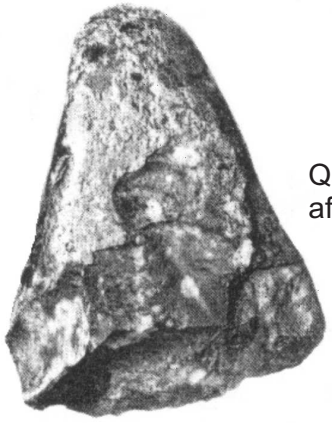
Type 3



Lahun, 12th Dynasty,
M247

Lahun, Middle Kingdom,
BM EA4768

Type 4



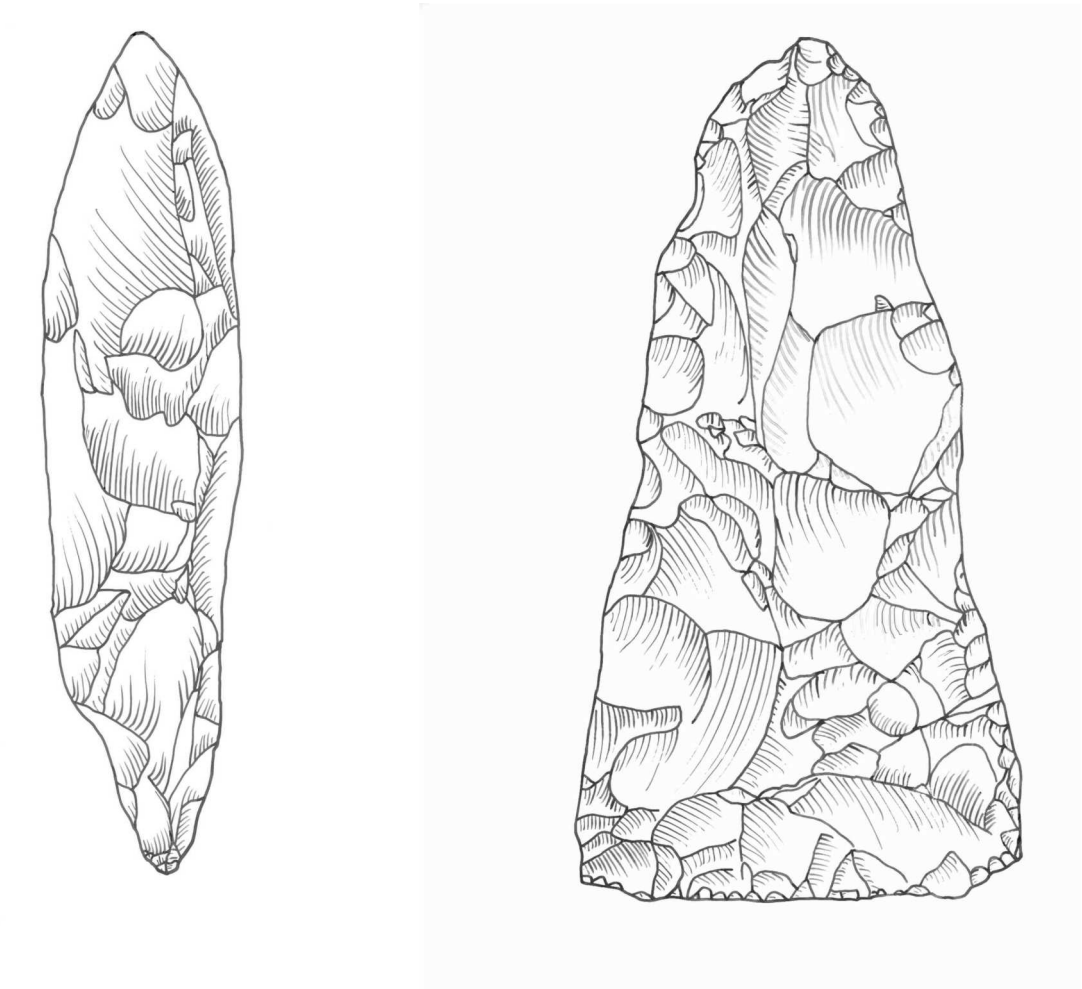
Qasr el-Sagh, Middle Kingdom
after Caton-Thompson *et al*. Pl. 55.23

3cm

Axes

Plate 60

Type 1



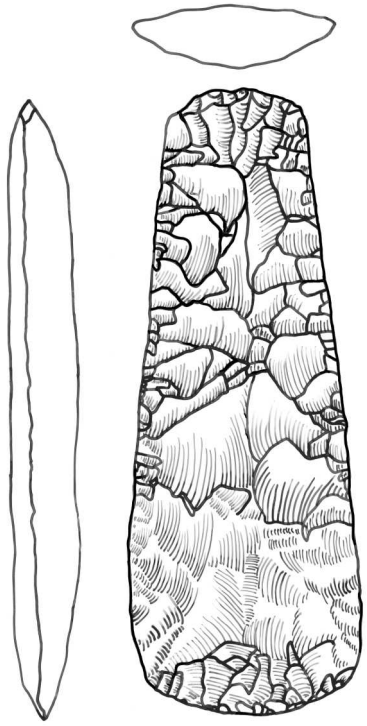
Giza, 1st-4th Dynasty,
after Kromer 1978, pl. 15.2

3cm

Adze or Hoe

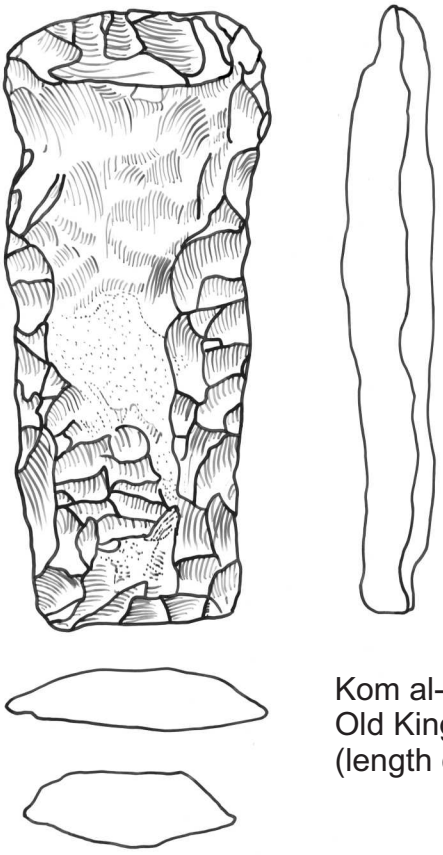
Plate 61

Type 1



Kom al-Ahmar,
Old Kingdom, after Pawlik 2005, fig.18
(length c.16cm)

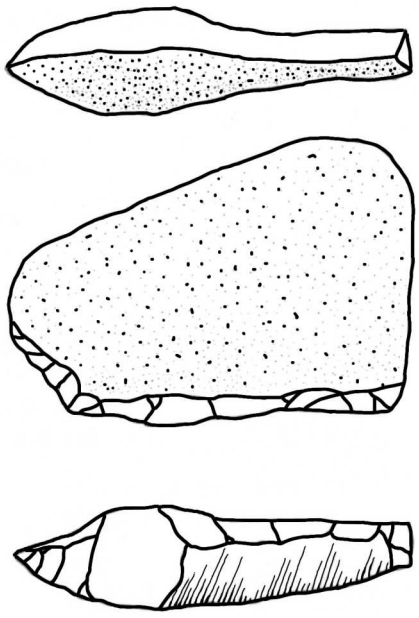
Type 2



Kom al-Ahmar
Old Kingdom, after Pawlik 2005, fig. 20
(length c.16cm)

Adze or Hoe

Plate 62



Type 4

New Kingdom, Karnak,
after Miller, 1985, 233, fig. 3.11
(actual size)

Type 5

New Kingdom, Thebes West,
after Seton Karr 1905, pl.V,11
(35cm long)

Adze or Hoe

Plate 63

Type 3

UC16739
New Kingdom Lahun

Actual size

Hoe

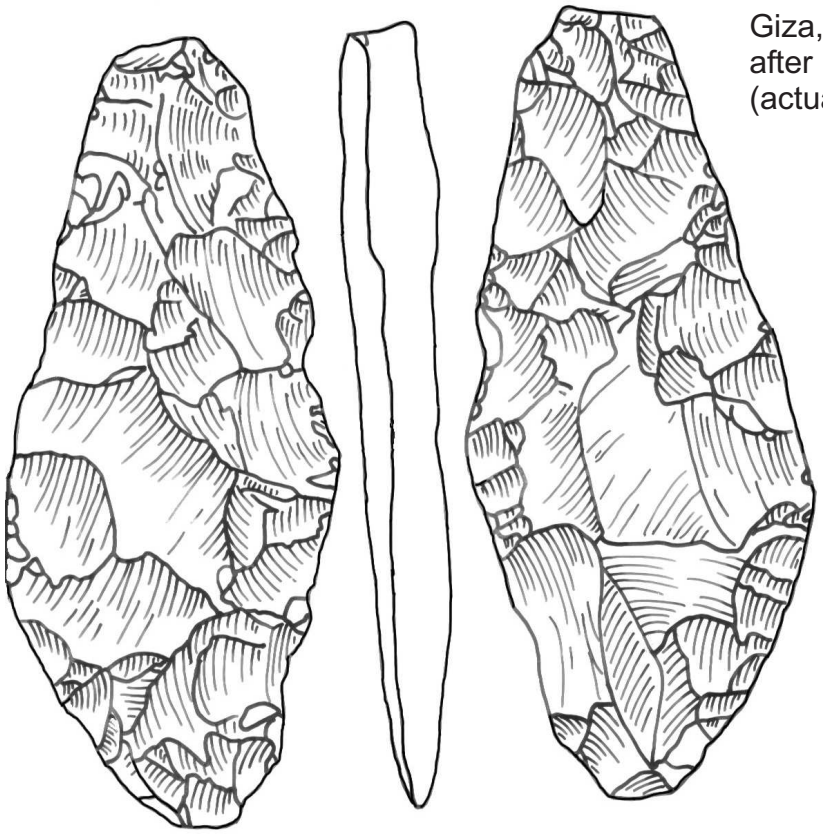
Plate 64

Qau, Grave 7324, Early Dynastic,
after Spencer 1980, 100, pl. 79, no, 749

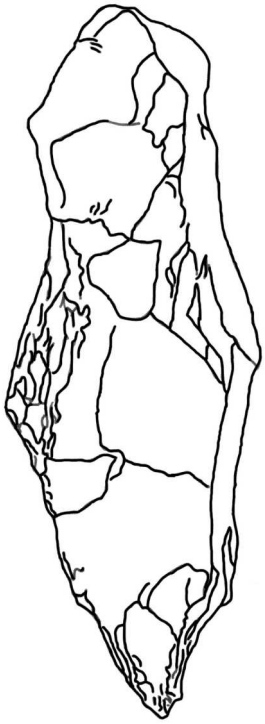
Actual size

Picks

Plate 65



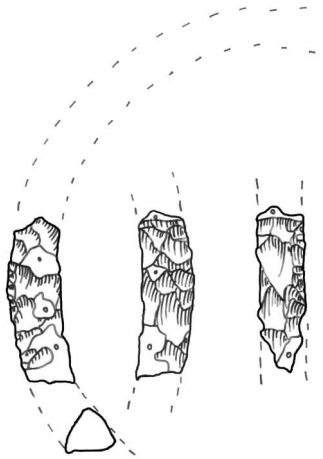
Giza, 1st-4th Dynasty,
after Kromer 1978, pl.16.2
(actual size)



Thebes West, New Kingdom,
after Seton Karr 1905, pl V.12
(42cm long)

Bracelets

Plate 66



Tell el Fara' in - Buto, Early Dynastic
after Schmidt 1989b, 15.6

Actual size

Drill Bits

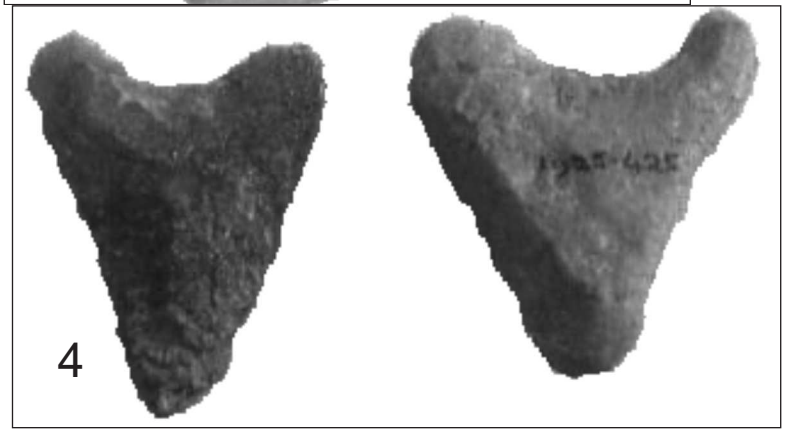
1. Bet Khallaf, 3rd Dynasty
BM EA67626

2. Bet Khallaf, 3rd Dynasty, M1103

3. Amarna, 18th Dynasty M11523

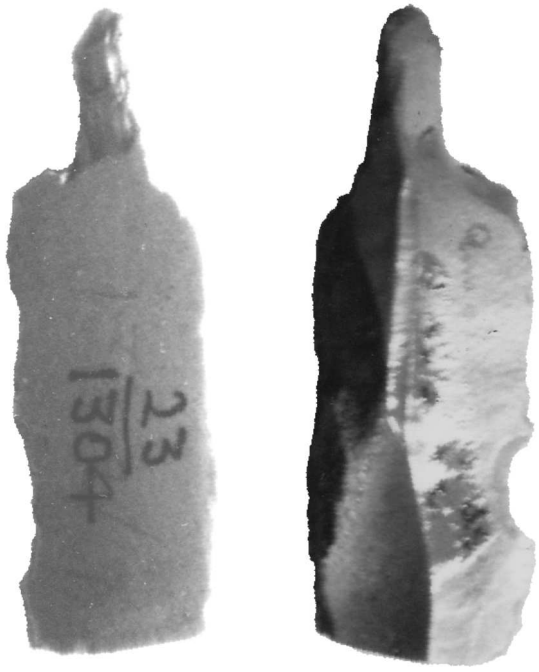
4. Qasr el Sagh, Middle Kingdom
Ashmolean 1925.425 18 and 19

Actual size



Borers

Plate 68

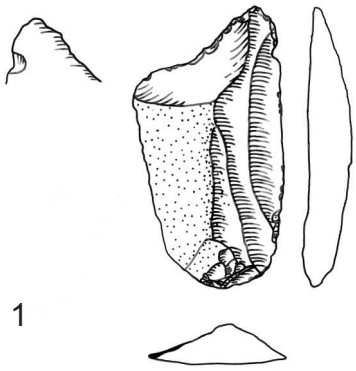


Second Intermediate Period,
Qau, Grave 1304, Ashmolean 1923.548a

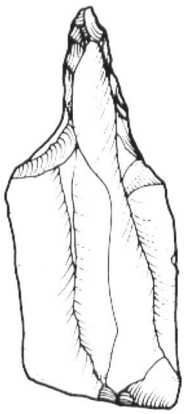
1cm

Borers

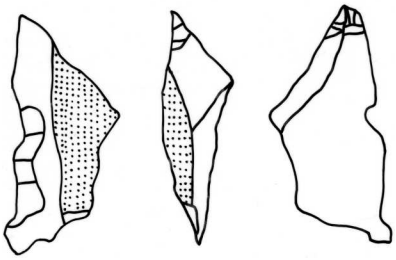
Plate 69



1



2



3

4

Actual size

1. 1st Dynasty Helwan (after Hikade 2005, 35.1); 2. Early Dynastic Hierakonpolis, Liverpool University E6649/3 (after Adams 1995, 148); 3. New Kingdom, East Karnak (after Miller 1985, 1.1); Sait/Persian, East Karnak (after Miller 1985, 1.2).

Steep End-Scrapers Plate 70

39311 Amarna, New Kingdom

Glossary of Key Terms

*Items which are cross-referenced are marked **

Anubis

A god who took the form of a canine or human with canine head. Anubis was a god of the necropolis and was particularly associated with mummification. Anubis was usually portrayed black, probably relating to the colour of decaying corpses and the black soil of the Nile (associated with rebirth).

Apophis (Apep)

Deity who took the form of a snake and who was considered the archenemy of the god Re. Apophis symbolised the forces of evil and chaos. While he was sometimes equated with *Seth, he is also shown being defeated by *Seth. The 'evil eye of Apophis' could only be defeated by *Seth or the *Eye of Re.

apotropaic wand

A ritual implement, usually made from hippopotamus tusk, with images of various protective deities inscribed thereon. Such implements were associated with protection in childbirth. Existing examples date to the Middle Kingdom, though there are depictions of them in tombs of the New Kingdom.

arrises

The raised lines on a flint resulting from other pieces being detached. They are formed at the junction of the meeting between two removal negatives.

Bes

The term Bes is applied to several dwarf deities portrayed with bandy legs, a protruding tongue and with the tail and mane of a lion. Bes was associated with protection of women in childbirth and was apparent in both state religion and domestic piety.

biface

A flint tool with two faces from which pieces have been detached.

blades and flakes

Pieces of flint which have been detached from the core by knapping. A blade is conventionally defined as a piece twice as long as it is wide and has parallel or almost parallel margins.

Book of the Dead

A modern name for a collection of funerary spells which succeeded and in part derived from the **Coffin Texts*. These were usually written on papyri or upon the walls of tombs and were introduced at the end of the Second Intermediate Period.

cache, of temple

Large quantities of discarded ritual items have been found buried in temples such as Karnak and Luxor. These include cult statues and items which, it is surmised, were given as offerings by devotees. It is believed that temples periodically disposed of such items but as they were ideologically important they were buried within the temples themselves.

Coffin Texts

A modern name for spells which are in part later versions of the **Pyramid Texts* and date from the First Intermediate Period. Some were written on the interior of coffins and others on papyri or tomb walls.

cortex

The weathered surface of flint. This occurs on most natural pebbles.

cortical

Of the cortex.

deben

A weight of copper referring to a monetary value. By the New Kingdom a deben weight was about 91 grams. Goods were bartered according to how many deben of copper they might equal in value.

determinative
A hieroglyphic character placed at the end of a hieroglyphic word which was used to clarify the meaning of the word through indicating its categorization.

distal
The end of the blade or flake which is opposite to the *proximal end, that is, opposite the struck end.

Divine Birth scenes
Formal scenes depicting the ruler as descended from a human mother and divine father. A famous example is the scene of the conception and birth of Hatshepsut in her mortuary temple at Deir el-Bahri.

dorsal surface
The side of a flake which shows evidence of previous removals or the original cortical surface.

Duat
The residence of *Osiris and abode of the dead, often conceived as the underworld. Re was said to travel to the Duat during the night. The Duat was often described as divided into caves, coinciding with the hours of the night.

Emic/etic
'Emic' is that which is felt and understood by those participating in the activity or culture under study. 'Etic' is the way in which outsiders understand the culture or activity under study.

expedient tools (*ad hoc* tools)
Non-formal tools, largely consisting of flakes. These require little skill in manufacture.

Eye of Re/Horus

While the two have differing meanings they were sometimes confused by the ancient Egyptians. Both took the form of a stylised eye, the Eye of Re usually being the right eye, and the Eye of Horus the left eye.

The Eye of Re was the creative principal of the god *Re. From at least the New Kingdom the Eye was personified by goddesses, particularly *Hathor, *Isis, *Sekhmet and Mut. The Eye was closely associated with the goddess Wadjyt, the personification of the *uraeus.

The Eye of Horus was associated with the moon. In mythology *Horus lost his left eye but this was later magically restored. It was thus a symbol of healing.

faience.
A non-clay ceramic usually glazed blue or green and consisting of crushed quartz, lime and natron or plant ash.

false consciousness
In Marxism this is failure by the proletariat to realise their means of oppression or exploitation. For example, proponents of the idea might claim that state-run lotteries exploit the poor and the poor may have a false consciousness in seeing them as a good thing rather than a means of exploitation.

Field of Reeds
A heavenly paradise or abode of the justified deceased in which they could gather abundant crops. It was usually considered to be situated in the east, from whence the sun arises.

flint
By far the most common knapped material is that which some archaeologists call ‘flint’ and others ‘chert’. I have used the term flint to refer to both. To summarise, I use the term ‘flint’ to mean a sedimentary, siliceous rocks usually worked by knapping. I have chosen this usage because: the term ‘flint’ is traditionally used by English speaking archaeologists working on Old World material; because among archaeologists ‘chert’ is often thought of as a low grade and yet the Egyptian material is high grade; as the ancient Egyptians probably used only one term, *ds*, to refer to ‘flint’ and ‘chert’ I feel no need to distinguish between the two.

The term ‘flint’ and ‘chert’, and even ‘chalcedony’ are variably used (for a useful summary see Luedtke 1992, 5-6) by petrologists, archaeologists and Egyptologists (Rizkana and Seeher 1988, 14). In petrology the term ‘chert’ is usually used to mean all microcrystalline, cryptocrystalline and microfibrous quartz (but not quartzite). ‘Flint’ refers to types of ‘chert’ which occur in chalk and marly limestone formations. By this definition the material commonly found in Egypt is always ‘chert’ since it is found in limestone. Among archaeologists chert is often said to be lower quality than flint. Such usage is particularly prevalent in America. However, much of the material which may be classed as ‘chert’ from Egypt is of a high quality with a slightly glossy surface (**Appendix I, page 373**). Finally, English speaking archaeologists working in Old World lithics have traditionally used the term ‘flint’ for material others might class as both ‘chert’ and ‘flint’ (Rosen 1997, 32, 38; for examples in Egyptology see Rizkana and Seeher 1988 and Holmes 1989).

Among petrologists, chalcedony is sometimes considered separately from chert due to its fibrous structure. Since many cherts contain both microcrystaline and microfibrous quartz, it is sometimes difficult to classify a rock as completely chalcedony, thus its general inclusion as a variety of chert.

When exploring such a material in the past it is of course important to consider ancient classifications. It is seems probable that for the ancient Egyptians the term *ds* best equates to what we would consider ‘flint’ or ‘chert’. However, this term may also have covered obsidian and possibly even rock crystal (see **2.3.2.3**).
(Luedtke, B.E. 1992. *An Archaeologist’s Guide to Chert and Flint*. Archaeological Research Tools 7. Los Angeles: Institute of Archaeology, University of California).

functionalism

A view whereby utility is the basis of explanation. Cultural traits are seen as adaptive allowing the culture to survive. In archaeology this is often uses the term cultural evolutionism.

Gricean Pragmatics

A term coined by the philosopher Paul Grice (Grice 1989, 28–30) explaining the link between utterances and meaning in language. Grice’s Cooperative Principle is that a statement must be correct. The Cooperative Principle contains maxims to ensure a

conversation is understood. These include relevance and quality (truthfulness). In Egyptology Landgráfová (2008) has used these principals to look for metaphor in Egyptian love poetry. So, in the case of Egyptian poems, describing the beloved as a house is literal nonsense. It only makes sense as metaphor. The suggested metaphoric use then had to make sense within context, that is, within constructs of ancient Egyptian society and within the context of the metaphor itself. One might apply this to artefacts by looking for artefacts which make no sense within their context. These artefacts might then be thought of as metaphoric within that context.

habitus

This a complex term adopted by Pierre Bourdieu. In simple terms, *habitus* refers to a set of acquired ideas, dispositions and taste concerning the world and ways of acting therein. It is not consciously acquired.

haptic communication

Meaning communicated through the sense of touch.

Hathor

A goddess regarded as the divine mother of each reigning king. There were more temples to Hathor than any other deity in ancient Egypt. She was often shown in the form of a cow. Her headdress of the sun-disk between cow horns, reflected her solar and bovine connections. She was also associated with motherhood and with mining and minerals.

heart scarab

A type of amulet used to prevent the heart from saying detrimental things about its owner in the afterlife. Heart scarabs were placed on the body of the deceased and usually made from green or dark coloured materials. Ramesside heart scarabs were usually depicted with a human head and did not have a flat underside.

hinge fracture

A removal of a flake or blade in which the blow falls short of the expected result. Instead of the blow resulting in a sharp, feathered termination, the termination turns abruptly outward resulting in a blunted termination.

Horus

A falcon god who embodied divine kingship. It was Horus who performed the *'Opening of the mouth ceremony' on his dead father and thus became the legitimate ruler. He was usually said to be the child of the goddess Isis and the god Osiris. From the Late Period, Horus the child-god was an important motif and used on a form of amulet called a *cippus*. On such artefacts he was used to combat snake bites and scorpion stings.

Horus, Four Sons of

Four deities with a funerary role whose job was to protect the deceased. Amulets depicting the Four Sons of Horus were placed on the chest of mummies. They are also depicted on canopic jars (jars used to contain and thus protect internal organs of the deceased).

iconic style

A term coined by James Sackett. This is deliberately or consciously manufactured style, as opposed to *isochrestic *style.

Imperishable Stars

Stars of the northern sky which appear around the pole star. The deceased were sometimes said to join the Imperishable stars, and thus they too would not perish.

Inundation

Until the building of the Aswan dam the Inundation of the Nile was an annual event. While it could cause devastating floods it was essential to the fertility of the land of Egypt.

isochrestic style

A term coined by James Sackett. This is *style which is not consciously formed. It results from enculturation, or **habitus*.

Isis

The goddess who was sister and wife to *Osiris and mother of *Horus and encapsulated the virtues of the perfect wife and mother. She took on several of the aspects of *Hathor. In the Graeco-Roman Period she was considered the mother of the reigning king.

ka

The term is difficult to translate but roughly equates to the creative life-force of the individual or god.

key symbol/key metaphor

A *symbol or *metaphor which underpins a host of other metaphors. For example, the idea that up is good may be said to be a key metaphor and results in other metaphors such as tall is good, up is growth, down is the underworld, down is failure, etc.

kinetic use/kinetically utilitarian

Function which has a physical outcome, as opposed to ideological outcome. For example a slaughter knife may be used to physically kill an animal. This would be kinetic use.

maat

Truth, justice and cosmic order. Kings were said to live on maat. Maat could be personified as a seated woman wearing an ostrich feather or represented by only the feather.

Mafdet

A feline goddess who protected against snakes and scorpions and is associated with the king. She is sometimes seen as the personification of royal execution tools.

mastaba

A flat-topped tomb with walls which slop inward so that the roof has a smaller area than the base. Mastaba tombs were used by the elite and nobility and the pre and Early Dynastic. By the Old Kingdom they were used mainly be the elite, though

increasingly other tomb forms, particularly the rock-cut tomb, was popular. By the New Kingdom the mastaba tomb was no longer built.

Meretseger

A cobra goddess of the Theban necropolis whose name means 'she-who-loves-silence'. She was especially revered at Deir el-Medina and was thought to punish wrongdoers through blindness. She is principally known from the New Kingdom.

metaphor (theory)

Metaphor theory is diversely defined (Tarlow 1999, 40), but all definitions see thought as embodied and imaginative, rather than literary. Metaphor theory is akin to some theories of symbolism but suggests a more multivocal approach to artefact signification. It has been popularised in material culture by Tilley (1999).

Metaphor may be seen as symbolism, especially as both terms are variously used by different scholars; thus, at use of 'metaphor' in this thesis might be identical to another person's 'symbolism'. I see symbolism and *symbols as one type of metaphor and prefer the term 'metaphor theory' for this thesis rather than 'symbolism' because: a) symbolism tends to deal more specifically with explicit and univocal metaphor; b) metaphor theory specifically makes use of the notion of live and dead metaphors which may be important for the study of tropes over a long period such as Dynastic Egypt.

In this thesis the term 'metaphor' best equates to what linguistically would be termed a *'trope'. However, rather than invent a new term such as 'trope theory', I have used the more accepted term 'metaphor theory'.

Metaphor and metaphor theory is discussed at greater length in **2.2.2**.

microwear

Traces of wear on stone tools which are not visible to the naked eye.

Min

Ithyphallic god who symbolized male power and was associated with mining and the Eastern Desert. Min originates in Predynastic Egypt, though continued to be popular throughout the Dynastic era.

multivocal
Having more than one meaning.

Neith
A creator goddess associated with the *Eye of Re and the primeval waters. She was often shown as an archer and sometimes described as androgynous. Neith is known from the Early Dynastic onward.

nome
A province of Egypt. For most of the Dynastic period, there were twenty-two Upper Egyptian nomes and twenty Lower Egyptian nomes.

Nun, **waters of**
God representing the ocean of chaos from which creation arose at the beginning of time. The waters of Nun continued to exist at the edges of the known world.

Nut
A sky goddess often shown in human form, or more occasionally as a cow. Nut's body was shown arching over the earth and it was through this that the sun-god *Re travelled each night.

obsidian
A volcanic rock formed of natural glass.

Opening of the mouth ceremony
This was a ritual by which the deceased and statues were reanimated or brought to life. Mummies and statues were transformed by the ritual into vessels for the **ka* of the deceased. The ritual was elaborate and involved touching the mummy or statue with various objects to restore its senses. From the Old Kingdom we have sets of artefacts used in the ceremony. It was also described in texts.

Osiris

The primary Egyptian god of death and resurrection. Originally the god Osiris was associated with the deceased king but after the Old Kingdom all the justified deceased were associated with this deity.

ostracon (plural ostraca)

A pottery sherd or stone fragment with drawing or writing thereon.

palette

A flat piece of stone, sometimes decorated, which was used to grind pigments. In the Predynastic and Early Dynastic Periods, oversize ceremonial palettes were also made.

post-processualism

An umbrella term for the belief that *processualism is unsatisfactory as a methodology for understanding the past, it is a critical reaction to the 'New Archaeology'. Post-processualists stress that archaeological results are influenced by the archaeologist, their background and opinions, it tends to be reflexive. Post-processual approaches include neo-Marxism, contextual archaeologies and feminist archaeologies.

pressure flaking

Removal of a detached piece from the core by pressure rather than percussion.

processualism

This is sometimes called 'New Archaeology'. It is a view that sees hypothesis and scientific method as integral to archaeology. It also stresses that archaeology is more than establishing chronology and advocates functionalism. In functionalism evolutionally process is seen as the important to cultural development. Processualist theories include Systems Theory and tend to embrace logical positivism (the belief that all aspects of culture can be accessed through material remains) and hypothetico-deductive (seen as scientific method of observing and then testing hypothesise) models.

psš-kf

A specialised bifacial and bifurcated stone tool used in the 'Opening of the mouth' ceremony. Ideologically such items were made of flint, though after the Early Dynastic they are usually made of other stone.

Ptah

A creator god usually shown as a mummy and wearing a tightly fitting skull cap and straight beard.

pylon

A ceremonial gateway consisting of two towers linked over their central entrance way.

Pyramid Texts

A corpus of funerary texts found in Old Kingdom and First Intermediate Period pyramids. These consist of around 800 spells designed to ensure a successful afterlife. The earliest extant examples date from the Fifth Dynasty pyramid of Unas (2375–2345 BC), though these may have been based on an earlier tradition.

Qurn

The mountain above the Theban necropolis which bears a resemblance to a natural pyramid.

Re (Ra)

A sun-god often shown as a hawk-headed deity. He is the principal creator god in Egyptian mythology.

reserve head

Reserve heads are a type of limestone head found only in some elite Giza plateau burials dating to the 4th–5th dynasties. Around 30 are known. The purpose of these is not clear though one theory suggests that they were spare heads, hence the name 'reserve head'.

rite of passage

A ritual marking a person's movement from one life stage to another.

ripple (on flint)

Concentric waves with the centre being the point of knapping impact.

scar pattern

The pattern left by the negative flakes on a piece of worked flint.

scarab

A dung beetle representing Re, the creator and solar deity, in a state of becoming.

Sekhmet

An aggressive goddess often shown in lioness form. She is frequently posited as a daughter of *Re and is associated with disease and the destruction caused by the *Inundation.

***sem*-priest**

Funerary priest who oversaw the process of mummification and burials

Seth

God of chaos and confusion. In early times Seth had positive associations and helped Re repel *Apophis. In later periods he was more negatively constructed as an enemy of *Re. The conflict between Seth and his brother *Horus became mythologised. The Seth animal is an animal with curved snout, squared ears, a canine body and a forked tail. The was-sceptre is closely associated with Seth.

sickle gloss

A sheen along the working edge of a sickle produced by prolonged friction with plant material.

Sobek

A crocodile god associated with the Inundation, fertility and produce of the Nile.

Sothis

The dog star Sirius. The heliacal rising of Sothis occurs once every 1460 years when the star appears at the same time as the beginning of the solar year.

stela (plural stelae)

A slab of stone or wood with inscriptions of a religious nature.

striking platform

The surface of a flint piece which receives the force used to detach it from the main piece.

style

While style consists of action similarly carried out over a specific geographic pattern which is not wholly mechanically necessary. It is sometimes seen as marking ethnic identity but can also be a marker of age, gender or other social group. See iconic and isochrestic style.

symbol

See entry for metaphor. As stated above, my use of the term ‘metaphor’ in some cases replaces others use of the term ‘symbol’. However, in this thesis, while the term ‘metaphor’ is often preferred, the term ‘symbol’ is also occasionally used. A symbol is considered a specific type of *metaphor which is both explicit and univocal. Thus, a written word may be a symbol for the actual object. The term ‘symbol’ is also used in the thesis when discussing the work of others who explicitly use the term ‘symbol’.

Taweret

A goddess taking the form of a hippopotamus, often with the back and tail of a crocodile. She was associated with the protection of women in childbirth. The Egyptian constellations connected the hippopotamus with the northern sky and it was thus Taweret who was depicted on the ceiling of Seti I in the Valley of the Kings.

Thoth

God taking the form of an ibis or baboon. Thoth was a god of writing and knowledge and was closely associated with the moon. He was often shown with the moon-disc and crescent upon his head. In the *_Pyramid Texts_* (PT359) the gods were said to gain access to the afterlife ‘on the wing of Thoth’.

trope

A term traditionally used in linguistics to mean the use of a word or phrase which is other than its literal meaning. This includes *symbol, *metaphor and metonym, synecdoche and irony.

uraeus (plural uraei)

The uraeus was usually depicted as a protective rearing cobra, or sometimes a cobra with a human head. She was often personified as the goddess Wadjyt and was a symbol of royalty or divinity. Kings are shown wearing the uraeus upon their brows. The *Eye of Re was said to be a uraeus.

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67601

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle	colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4865	context	
date evidence					
references	Petrie 1891, 12, 51-52.				
description	Prismatic. Gloss along irregular serrated end c.1 in.				

max length	60.2	max width	12.6	retouch			
width(quarter)	12.6	thickness(quarter)	3.9			termination	hinged (slightly)
width(half)	12	thickness(half)	4.2			blade part	distal
width(3 quarter)	8.8	thickness(3 quarter)	2.8			segmented/truncated	segmented
wear	Gloss only about 1 in						

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67603

simple name	blade, retouched, proxim	period	Middle Kingdom	size	
functional name	sickle	colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4867	context	
date evidence					
references	Petrie 1891, 12, 51-52.				
description	Broken at distal end and abrupt retouch at proximal. Prismatic. Gloss on all dosal left facet. 1mm on ventral				

max length	63.8	max width	13.6	retouch			
width(quarter)	12.8	thickness(quarter)	4.3			termination	
width(half)	13.6	thickness(half)	3.9			blade part	medial
width(3 quarter)	13.1	thickness(3 quarter)	3.8			segmented/truncated	seg + trunc
wear	Gloss						

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67602

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle	colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4866	context	
date evidence					
references	Petrie 1891, 12, 51-52.				
description	Gloss along all dorsal serrated side, prismatic.				

max length	44.5	max width	13.1	retouch	dorsal		
width(quarter)	12.6	thickness(quarter)	3.4			termination	
width(half)	13	thickness(half)	4.5			blade part	
width(3 quarter)	12.3	thickness(3 quarter)	4.8			segmented/truncated	seg + trunc
wear	Gloss/polish on dorsal side on whole of left facet. On ventral side only 1 in						

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67604

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle	colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4868	context	

date evidence	
references	Petrie 1891, 12, 51-52.
description	Prismatic, abrupt proximal, pointed at distal.

max length	87.6	max width	18.2	retouch			
width(quarter)	18.2	thickness(quarter)	4.2			termination	
width(half)	15.3	thickness(half)	3.6			blade part	proximal
width(3 quarter)	11.5	thickness(3 quarter)	3.6			segmented/truncated	seg + trunc

wear	Gloss along complete facet, dorsal left (serrated edge 1mm in ventral)

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67605

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle	colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4869	context	

date evidence	
references	Petrie 1891, 12, 51-52.
description	Irregular serrations, prismatic.

max length	36.7	max width	10.5	retouch			
width(quarter)	9.9	thickness(quarter)	2.8			termination	
width(half)	9.4	thickness(half)	2.7			blade part	medial
width(3 quarter)	9.6	thickness(3 quarter)	3			segmented/truncated	segmented

wear	Gloss c 1mm in dorsal and ventral

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67607

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle	colour	light pinkish brown	shape	
excavation no	30.12.90	house/tomb	4871	context	

date evidence	
references	Petrie 1891, 12, 51-52.
description	Prismatic, irregular serrations.

max length	52	max width	12.4	retouch			
width(quarter)	12.6	thickness(quarter)	2.8			termination	
width(half)	13	thickness(half)	3.1			blade part	medial
width(3 quarter)	12.2	thickness(3 quarter)	3			segmented/truncated	truncated

wear	Gloss along most of facet of serrated dorsal edge, 1mm in on ventral

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/1

simple name	flake, retouched	period	Middle Kingdom			size	62.2x38.8x3.4
functional name			colour	mid grey		shape	
excavation no			house/tomb			context	

date evidence	
references	Naville and Griffith 1890, 39
description	Steep retouch dorsal right.

max length	62.2	max width	38.8	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)	38.8	thickness(half)	3.4			blade part	complete
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/1

simple name	blade, retouched, lateral	period	Middle Kingdom			size	40x15x3
functional name	sickle		colour	mid brown		shape	intermediate
excavation no			house/tomb			context	

date evidence	
references	Naville and Griffith 1890, 39.
description	Gloss dorsal and ventral along lateral edge with serrations.

max length	40	max width	15.1	retouch	dorsal		
width(quarter)	15.1	thickness(quarter)	3.1			termination	
width(half)	15	thickness(half)	3			blade part	medial
width(3 quarter)	13.8	thickness(3 quarter)	2.8			segmented/truncated	

wear	Gloss

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/2

simple name	blade, retouched, lateral	period	Middle Kingdom			size	60x15.8x4.8
functional name	sickle		colour	mid brown		shape	intermediate
excavation no			house/tomb			context	

date evidence	
references	Naville and Griffith 1890, 39.
description	Gloss dorsal and ventral along lateral edge with serrations.

max length	60	max width	17.2	retouch			
width(quarter)	14	thickness(quarter)	4.8			termination	
width(half)	15.8	thickness(half)	4.8			blade part	proximal
width(3 quarter)	17.2	thickness(3 quarter)	4.5			segmented/truncated	

wear	Gloss

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/3
simple name	blade, retouched, lateral	period	Middle Kingdom	size	67x17x14.1
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	Naville and Griffith 1890, 39.				
description	Rough retouch, left ventral.				

max length	67	max width	17	retouch	ventral
width(quarter)	16.9	thickness(quarter)	14.4	termination	
width(half)	17	thickness(half)	14.1	blade part	complete
width(3 quarter)	14.1	thickness(3 quarter)	13.8	segmented/truncated	
wear					

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/4
simple name	blade, unretouched	period	Middle Kingdom	size	83.4x13.6x6.6
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	Naville and Griffith 1890, 39.				
description					

max length	83.4	max width	16	retouch	
width(quarter)	16	thickness(quarter)	6.9	termination	
width(half)	13.6	thickness(half)	6.6	blade part	complete
width(3 quarter)	11	thickness(3 quarter)	6.1	segmented/truncated	
wear					

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/5
simple name	blade, retouched, lateral	period	Middle Kingdom	size	64.7x16.3x5
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references	Naville and Griffith 1890, 39.				
description	Steep retouch dorsal left and right.				

max length	64.7	max width	17.5	retouch	dorsal
width(quarter)	17.5	thickness(quarter)	6.1	termination	
width(half)	16.3	thickness(half)	5	blade part	complete
width(3 quarter)	15.9	thickness(3 quarter)	6.1	segmented/truncated	
wear					

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/6

simple name	blade, retouched, lateral	period	Middle Kingdom	size	67x15.8x5.8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	

date evidence	
references	Naville and Griffith 1890, 39.
description	

max length	67	max width	16	retouch	dorsal		
width(quarter)	16	thickness(quarter)	4.3			termination	
width(half)	15.8	thickness(half)	5.8			blade part	complete
width(3 quarter)	15.8	thickness(3 quarter)	5.5			segmented/truncated	

wear	

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/7

simple name	blade, unretouched	period	Middle Kingdom	size	65.2x12.5x3.9
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	

date evidence	
references	Naville and Griffith 1890, 39.
description	Traces of deposit.

max length	65.2	max width	12.5	retouch			
width(quarter)	11.6	thickness(quarter)	4.4			termination	
width(half)	12.5	thickness(half)	3.9			blade part	complete
width(3 quarter)	12.5	thickness(3 quarter)	3.8			segmented/truncated	

wear	

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/8

simple name	core	period	Middle Kingdom	size	57.1x54.6x35
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	Naville and Griffith 1890, 39.
description	Heavily patinated rough core. Glossy some cortex.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Tell el Yahudiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.267/9

simple name	blade, unretouched, seg	period	Middle Kingdom	size	32.9x32.2x6.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	Naville and Griffith 1890, 39.
description	Broken blade.

max length	32.9	max width	32.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.1			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	segmented

wear	

PLACE	Arsinoe	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.769

simple name	blade	period	Old Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	.
description	Petrie 1888. Pointed at both ends. Triangular cross section.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Arsinoe	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.769/1

simple name	knife, OK6	period	Old Kingdom? New Kingdom?	size	12.7 x3.8cm
functional name		colour	mid brown flint	shape	
excavation no		house/tomb		context	

date evidence	
references	Petrie et al. 1889, 58 pl. XXVIII, II. Petrie believed this to be 18th or 19th Dynasty. However his method of dating, from depth beneath ground is not accurate.
description	Hook handled bifacial knife. Handle underside made by blade pointing toward user. Seitenbezogenheit.

max length	127	max width	38	retouch			
width(quarter)		thickness(quarter)	8.8			termination	
width(half)		thickness(half)	9			blade part	
width(3 quarter)		thickness(3 quarter)	6.6			segmented/truncated	

wear	

PLACE	Arsinoe	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.769/2

simple name	knife fragment, handle	period	Old Kingdom? New Kingdom?	size	8.3 x 4.4cm
functional name		colour	brown flint	shape	
excavation no		house/tomb		context	

date evidence

references: Petrie et al. 1889, 58 pl. XXVIII, (However this example is not illustrated). Petrie believed this group to be 18th or 19th Dynasty. However his method of dating, from depth beneath ground is not accurate.

description: Bifacial knife. Handle and part of blade. Handle underside made with blade pointing toward user. Retouched top and bottom by right handed person with blade pointing away. Positive Seitenbezogenheit

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.1	blade part	
width(3 quarter)		thickness(3 quarter)	6.7	segmented/truncated	

wear

PLACE	Arsinoe	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.769/3

simple name	knife, fragment	period	Old Kingdom? New Kingdom?	size	67 x 3.5cm
functional name		colour	mid brown flint	shape	
excavation no		house/tomb		context	

date evidence

references: Petrie et al. 1889, 58 pl. XXVIII, (However this example is not illustrated). Petrie believed this group to be 18th or 19th Dynasty. However his method of dating, from depth beneath ground is not accurate.

description: Tip of knife blade. Bifacial. Mid retouch on one side. Maximum thickness 3. Blade had been sharpened by right handed person with the blade pointing away. Positive Seitenbezogenheit

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Arsinoe	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1888.769/4

simple name	blade, pointed	period	Old Kingdom? New Kingdom?	size	7.9x1.6cm
functional name		colour	mid brown flint	shape	narrow
excavation no		house/tomb		context	

date evidence

references: Petrie et al. 1889, 58 pl. XXVIII, 1880, temple area (However this example is not illustrated). Petrie believed this group to be 18th or 19th Dynasty. However his method of dating, from depth beneath ground is not accurate.

description: Pointed blade with triangular cross section. This appears to be unretouched.

max length	78.9	max width	14.1	retouch	
width(quarter)	16.1	thickness(quarter)	6.4	termination	hinged
width(half)	14	thickness(half)	4.8	blade part	complete
width(3 quarter)	11.5	thickness(3 quarter)	4.3	segmented/truncated	

wear

PLACE	el Hammamiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.231
simple name	knife fragment	period	Old Kingdom	size	11.8x4.2x8.2cm
functional name		colour	mid brown flint	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	G. J. Chester. Unilateral notch handle. Blade part of knife missing. Flat retouch over both faces. One side slightly flatter than the other side. The knife blade appears to have been sharpened with the blade tip pointing away from the sharpener, though the underside of the handle shaped by tutning the point of the blade toward the sharpener. Positive Seitenbezogenheit. Straightish edge on profile. Presumed from an Old Kingdom tomb as a number are known from this area,				

max length	115	max width	42.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	8.2			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Gebel esh-Sheikh E	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.41/B
simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	G.J. Chester. crescentic triangular knife flaked over both faces.				

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Gebel esh-Sheikh E	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.41A
simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	G.J. Chester crescentic triangular knife flaked over both faces.				

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Gebel esh-Sheikh E	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.529

simple name	knife frag	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	G.J. Chester, bifacial knife fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583A

simple name	blade, unretouched	period	Old Kingdom, 4th Dynasty	size	8.6x1.9cm
functional name	broad/intermediate	colour	brown pinkish	shape	intermediate
excavation no	5Q3??89 (in ink)	house/tomb		context	Meidum 18

date evidence	
references	
description	From well of tomb. Double endscraper from same core as 1891.583 B.

max length	80.5	max width	20.5	retouch	direct, distal, steep
width(quarter)	10.6	thickness(quarter)		termination	retouched or dis
width(half)	17.6	thickness(half)		blade part	complete
width(3 quarter)	18.9	thickness(3 quarter)		segmented/truncated	

wear	Possible scratching on end

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583B

simple name	blade, unretouched	period	Old Kingdom, 4th Dynasty	size	7.7x1.9cm
functional name	broad/intermediate	colour	brown pinkish	shape	intermediate
excavation no		house/tomb		context	Meidum 18

date evidence	
references	
description	From well of tomb. Double endscraper from same core as 1891.583 A.

max length	75.9	max width	19	retouch	
width(quarter)	15.5	thickness(quarter)		termination	feathered
width(half)	16.7	thickness(half)		blade part	complete
width(3 quarter)	18.6	thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583C

simple name	razor/complete	period	Old Kingdom, 4th Dynasty	size	9x2cm
functional name	broad/intermediate	colour	brown pinkish	shape	broad
excavation no	62 (in pencil)	house/tomb		context	Meidum 18

date evidence

references

description: From well of tomb. Double endscraper, round end (retouch).

max length	92	max width	26.5	retouch	distal, direct
width(quarter)	24	thickness(quarter)	7.8	termination	retouched
width(half)	27	thickness(half)	7.9	blade part	complete
width(3 quarter)	26	thickness(3 quarter)	9.4	segmented/truncated	

wear

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583D

simple name	blade, intermediate	period	Old Kingdom, 4th Dynasty	size	9.3x2.1cm
functional name	broad/intermediate	colour	brown pinkish	shape	intermediate
excavation no		house/tomb		context	Meidum 18

date evidence

references

description: From well of tomb. Double endscraper, round end (retouch).

max length	93.2	max width	20.5	retouch	direct, distal
width(quarter)	20.1	thickness(quarter)	3.6	termination	retouched
width(half)	20.5	thickness(half)	5.8	blade part	complete
width(3 quarter)	20.5	thickness(3 quarter)	6.9	segmented/truncated	

wear

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583E

simple name	blade, intermediate/unret	period	Old Kingdom, 4th Dynasty	size	9.2x3.2cm
functional name	Intermediate	colour	brown pinkish	shape	broad
excavation no	10 (in pencil)	house/tomb		context	Meidum 18

date evidence

references

description: From well of tomb. Double endscraper, round end (retouch).

max length	92.5	max width	33.1	retouch	direct, proximal
width(quarter)	27.9	thickness(quarter)	4.4	termination	retouched
width(half)	30	thickness(half)	4.8	blade part	complete
width(3 quarter)	31.8	thickness(3 quarter)	4.7	segmented/truncated	

wear

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583F

simple name	blade, intermediate/unret	period	Old Kingdom, 4th Dynasty	size	7.5x2.5cm
functional name	broad/intermediate	colour	brown pinkish	shape	broad
excavation no	32 (in pencil)	house/tomb		context	Meidum 18

date evidence	
references	
description	From well of tomb. Double endscraper, round end (retouch).

max length	75	max width	23.1	retouch	direct		
width(quarter)	23	thickness(quarter)	5.4			termination	hinge (very sligh
width(half)	23.5	thickness(half)	8.4			blade part	complete
width(3 quarter)	23.4	thickness(3 quarter)	8			segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583G

simple name	blade, Intermediate	period	Old Kingdom, 4th Dynasty	size	5.4x2.3cm
functional name	broad/intermediate	colour	brown pinkish	shape	intermediate
excavation no	13 (in pencil)	house/tomb		context	Meidum 18

date evidence	
references	
description	From well of tomb. Double endscraper, round end (retouch), one end broken. Probably too long to be a razor proper, thus categorised as Intermediate

max length	52.9	max width	22.2	retouch	direct		
width(quarter)	22.8	thickness(quarter)	6.3			termination	
width(half)	21.8	thickness(half)	5.5			blade part	medial
width(3 quarter)	20.4	thickness(3 quarter)	5.6			segmented/truncated	segmented?

wear	

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1891.583H

simple name	blade, Intermediate	period	Old Kingdom, 4th Dynasty	size	6.1x2.8cm
functional name	broad/intermediate	colour	brown pinkish	shape	intermediate
excavation no	85 (in pencil)	house/tomb		context	Meidum 18

date evidence	
references	
description	From well of tomb. Double endscraper, round end (retouch), one end broken. (with slight remains of proximal bulb). Since this is broken at one end it is probably too long to be a razor proper

max length	61.3	max width	27.4	retouch	direct		
width(quarter)	27.4	thickness(quarter)	11.3			termination	
width(half)	24.8	thickness(half)	10.2			blade part	medial
width(3 quarter)	23.5	thickness(3 quarter)	7.1			segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1892.962

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	G.J. Chester.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Semaineh	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1892.966

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	G.J. Chester.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1892.972

simple name	knife, OKU?	period	Old Kingdom?	size	18.5x34x10
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	G.J. Chester.				

max length	18.5	max width	34	retouch	
width(quarter)		thickness(quarter)	8.9	termination	
width(half)		thickness(half)	10	blade part	
width(3 quarter)		thickness(3 quarter)	6.5	segmented/truncated	
wear					

PLACE	el-Qaar, Waadi Saiya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1892.980
simple name	blade, retouched, lateral	period	Old Kingdom, 6th Dynasty	size	8.3x2cm
functional name	sickle	colour	light brown	shape	
excavation no		house/tomb		context	tomb
date evidence					
references					
description	Denticulated right dorsal, retouch left dorsal.				

max length	82.1	max width		retouch	direct, proximal and lateral left		
width(quarter)	13.7	thickness(quarter)	3.8			termination	
width(half)	16.1	thickness(half)	4.5			blade part	distal
width(3 quarter)	17.8	thickness(3 quarter)	5.3			segmented/truncated	
wear	Gloss, dorsal right						

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	scraper	period	New Kingdom, 18th Dynasty	size	7.2x4.2cm
functional name		colour		shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Horseshoe shaped blade with retouch at one end. 1891-2 excavations. labelled '1-41 1893'.				

max length	72	max width	42.5	retouch	direct		
width(quarter)		thickness(quarter)	6.9			termination	feathered
width(half)	42.5	thickness(half)	7			blade part	complete
width(3 quarter)		thickness(3 quarter)	6.4			segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	flake, retouched	period	New Kingdom, 18th Dynasty	size	6.6x3.5cm
functional name		colour		shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Blade, irregular with retouch. Hinge fractures on dorsal side from previous removals. 1891-2 excavations.				

max length	65.6	max width	36.9	retouch	inverse		
width(quarter)		thickness(quarter)	4.2			termination	
width(half)		thickness(half)	4.4			blade part	proximal
width(3 quarter)		thickness(3 quarter)	4.9			segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	circular scraper	period	New Kingdom, 18th Dynasty	size	4x4.1cm
functional name		colour		shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Circular scraper. 1891-2 excavations.				

max length	40.9	max width	40	retouch	direct
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	11.2	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	4.1x3.6cm
functional name		colour	very pale brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Retouched broken blade with rough denticulation along both lateral sides. 1891-2 excavations.				

max length	40.3	max width	34.6	retouch	direct, lateral right and left (denticulated)
width(quarter)	33.3	thickness(quarter)	5.5	termination	feathered
width(half)	34.6	thickness(half)	5.7	blade part	
width(3 quarter)	33	thickness(3 quarter)	4.3	segmented/truncated	segmented
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	
functional name		colour	mid grey-brown	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Blade with possible retouch. Hinge fractures on dorsal side.				

max length	77.7	max width	25.2	retouch	direct, lateral (or trample/use wear)
width(quarter)	24.1	thickness(quarter)	5.6	termination	feathered
width(half)	24.2	thickness(half)	8.1	blade part	complete
width(3 quarter)	24.6	thickness(3 quarter)	7.8	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty			size	
functional name			colour	dark brown		shape	irregular
excavation no			house/tomb			context	Central City, du

date evidence	
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.
description	Blade with remains of cortex.

max length	99.1	max width	19	retouch			
width(quarter)	19.5	thickness(quarter)	7.8			termination	
width(half)	20.2	thickness(half)	7.1			blade part	complete
width(3 quarter)	19	thickness(3 quarter)	3.9			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty			size	
functional name			colour	mid brown-orange		shape	irregular
excavation no			house/tomb			context	Central City, du

date evidence	
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.
description	Blade with hinge fracture from previous removal and cortex.

max length	65.7	max width	21.3	retouch			
width(quarter)	21.2	thickness(quarter)	4.6			termination	feathered
width(half)	17.5	thickness(half)	5.8			blade part	complete
width(3 quarter)	18.5	thickness(3 quarter)	7.9			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty			size	
functional name			colour	mid grey-brown		shape	irregular
excavation no			house/tomb			context	Central City, du

date evidence	
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.
description	Cortex and lack of retouch suggests this may be a waste blade.

max length	65.1	max width	23.8	retouch			
width(quarter)	19.1	thickness(quarter)	6.8			termination	
width(half)	23.5	thickness(half)	8.8			blade part	proximal
width(3 quarter)	23.5	thickness(3 quarter)	9.3			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty			size	
functional name			colour	mid grey-brown		shape	irregular
excavation no			house/tomb			context	Central City, du

date evidence	
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.
description	Cortex and lack of retouch suggests this might be a waster blade.

max length	90.2	max width	20.9	retouch			
width(quarter)	21.7	thickness(quarter)	8.1			termination	
width(half)	22	thickness(half)	10			blade part	proximal
width(3 quarter)	23.4	thickness(3 quarter)	14.5			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty			size	
functional name			colour	mid grey-brown		shape	irregular
excavation no			house/tomb			context	Central City, du

date evidence	
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.
description	Lack of retouch and cortex suggests this may be a waste blade.

max length	97.2	max width	22.7	retouch			
width(quarter)	13.9	thickness(quarter)	5.5			termination	overshot
width(half)	15.4	thickness(half)	7.4			blade part	proximal
width(3 quarter)	20.8	thickness(3 quarter)	3.5			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty			size	
functional name			colour	mid grey-brown		shape	irregular
excavation no			house/tomb			context	Central City, du

date evidence	
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.
description	Twisted blade. Lack of retouch and the cortext suggests this may be a waste blade. 1891-2 excavations.

max length	82.6	max width	16.4	retouch			
width(quarter)	13.5	thickness(quarter)	7.3			termination	feathered
width(half)	14.9	thickness(half)	4.4			blade part	complete
width(3 quarter)	16.2	thickness(3 quarter)	4.7			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Heavily patinated blade, irregular. Flawed flint. 1891-2 excavations.				

max length	94.5	max width	35.6	retouch	
width(quarter)	19.4	thickness(quarter)	8.8	termination	
width(half)	34.7	thickness(half)	10	blade part	
width(3 quarter)	35	thickness(3 quarter)	13.4	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	flake	period	New Kingdom, 18th Dynasty	size	98.8x64x10
functional name		colour	pale orange	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Large irregular flake, waste. 1891-2 excavations.				

max length	98.8	max width	64	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	flake, retouched	period	New Kingdom, 18th Dynasty	size	96.4x37.5x9.3
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Irregular flake with some retouch along one edge. Cortex. Hinge fracture. 1891-2 excavations.				

max length	96.4	max width	37.5	retouch	
width(quarter)	34.8	thickness(quarter)	9.3	termination	hinged
width(half)	37.5	thickness(half)	8.8	blade part	
width(3 quarter)	30.2	thickness(3 quarter)	7.2	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	flake	period	New Kingdom, 18th Dynasty	size	85x54x10.5
functional name		colour	light orange	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	1891-2 excavations.				

max length	85	max width	54	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	blade, irregular	period	New Kingdom, 18th Dynasty	size	44.3x18.5x6.4
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Irregular blade. 1891-2 excavations.				

max length	44.3	max width	18.5	retouch	
width(quarter)	13.7	thickness(quarter)	2.2	termination	
width(half)	14.9	thickness(half)	4.6	blade part	
width(3 quarter)	18.5	thickness(3 quarter)	6.4	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	flake	period	New Kingdom, 18th Dynasty	size	30.8x33x13.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	1891-2 excavations.				

max length	30.8	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	flake	period	New Kingdom, 18th Dynasty	size	44.8x30.1x13.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Hard hammered waste flake with 100% cortex. 1891-2 excavations.				

max length	44.8	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	flake	period	New Kingdom, 18th Dynasty	size	42.6x20.4x6.3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Probable waste flake. 1891-2 excavations.				

max length	42.6	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41
simple name	blade, retouched, all	period	New Kingdom, 18th Dynasty	size	88.6x33.4x3.5
functional name		colour		shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.				
description	Rough rectangular blade with dorsal and ventral irregular retouch on all sides. 1891-2 excavations.				

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	flake	period	New Kingdom, 18th Dynasty		size	25.1x3.8x10.4	
functional name			colour	mid grey	shape		
excavation no			house/tomb		context	Central City, du	
date evidence							
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.						
description	Waste flake. 1891-2 excavations						
max length		max width		retouch			
width(quarter)		thickness(quarter)			termination		
width(half)		thickness(half)			blade part		
width(3 quarter)		thickness(3 quarter)			segmented/truncated		
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893 1-41

simple name	core	period	New Kingdom, 18th Dynasty		size	3x3.5x2.2cm	
functional name			colour	mid grey	shape		
excavation no			house/tomb		context	Central City, du	
date evidence							
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell states non-sickle blades were found.						
description	Irregular semi-pyramidal blade core, with top section struck off, perhaps as an attempted rejuvenation strategy (though there is no evidence for continued use of the core following this action). Some cortex remains on this piece. 1891-2 excavations.						
max length		max width		retouch			
width(quarter)		thickness(quarter)			termination		
width(half)		thickness(half)			blade part		
width(3 quarter)		thickness(3 quarter)			segmented/truncated		
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893.1-41

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty		size	6.5x2.4cm	
functional name	sickle		colour	mid orange/brown	shape		
excavation no			house/tomb		context	Central City, Pal	
date evidence							
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.						
description	Denticulated along one lateral edge. Backed (steep retouch) along opposite lateral edge and one end. Feathered at distal end. Possible traces of mastic. The retouch cuts through patina suggesting reuse of an earlier blade.						
max length	64.9	max width	24.4	retouch	direct, lateral right denticulated, lateral le		
width(quarter)	23.1	thickness(quarter)	3.6		termination	feathered	
width(half)	24.1	thickness(half)	4.9		blade part	distal	
width(3 quarter)	22.3	thickness(3 quarter)	4		segmented/truncated	truncated	
wear							

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893.1-41

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	7.4x2.1cm
functional name	sickle	colour	very dark brown	shape	
excavation no		house/tomb		context	Central City, Pal
date evidence					
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.				
description	Denticulated along one lateral edge. Backed (steep retouch) along opposite lateral edge and one end. Broken at other end. Sickle gloss along dorsal denticulated lateral edge. 1891-2 excavations				

max length	73.9	max width	20.9	retouch	dorsal
width(quarter)	20.9	thickness(quarter)	6.9	termination	
width(half)	20.6	thickness(half)	8.2	blade part	
width(3 quarter)	17.1	thickness(3 quarter)	6.6	segmented/truncated	seg+trunc
wear	Sickle gloss				

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893.1-41

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	5.9x2.7cm
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	Central City, Pal
date evidence					
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.				
description	Denticulated along one lateral end and steep retouch across other and along end. Traces of green mastic on ventral end and cortex 1891-2 excavations				

max length	58.4	max width	25.1	retouch	dorsal
width(quarter)	23.5	thickness(quarter)	6.2	termination	
width(half)	25.4	thickness(half)	9.6	blade part	
width(3 quarter)	25.8	thickness(3 quarter)	8.8	segmented/truncated	truncated
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893.1-41

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	3.5x2cm
functional name	sickle	colour	light mid brown	shape	
excavation no		house/tomb		context	Central City, Pal
date evidence					
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.				
description	Denticulated. Retouch across back and both ends. Possible traces of mastic on one side. 1891-2 excavations				

max length	34.1	max width	20	retouch	dorsal
width(quarter)	15.8	thickness(quarter)	3	termination	
width(half)	18.5	thickness(half)	3.8	blade part	
width(3 quarter)	20	thickness(3 quarter)	3.9	segmented/truncated	seg+trunc
wear					

PLACE	Amarna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1893.1-41

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	10.5x4.2cm
functional name	sickle	colour		shape	
excavation no		house/tomb		context	Central City, Pal

date evidence	
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.
description	Heavily retouched and denticulated blade. The denticulation is very irregular. The retouch is through a heavy patination suggesting reususe of an earlier, perhaps prehistoric, blade. Retouch across back and one end 1891-2 excavations

max length	105	max width	43.2	retouch	dorsal		
width(quarter)	37.2	thickness(quarter)	13.8			termination	feathered
width(half)	37.3	thickness(half)	12.8			blade part	complete
width(3 quarter)	42.4	thickness(3 quarter)	18.1			segmented/truncated	

wear	

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896.1908

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	118x29
functional name	broad/intermediate	colour	dark brown	shape	broad
excavation no		house/tomb		context	tomb K1

date evidence	
references	Garstang 1903, pl. XV group 2; p 18, pp 8-11, pls VI, VII. Tomb of Neter-khet. The item is illustrated on plate XV
description	Intermediate type.

max length	117	max width	28.6	retouch	dorsal		
width(quarter)	26.2	thickness(quarter)	4.8			termination	feathered
width(half)	26.4	thickness(half)	6.1			blade part	complete
width(3 quarter)	24.1	thickness(3 quarter)	6.6			segmented/truncated	

wear	

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896.1908

simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	72.2x90.1x22.5
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	tomb K1

date evidence	
references	Garstang and Sethe 1903, 8-11, pls. VI-VII.
description	Crescentic drill bit, unused.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	22.5			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896.1908

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	97.9x23.1x5.5
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	tomb K5

date evidence	
references	Garstang and Sethe 1903, 15-16, pl. XXIV, pl. XXV
description	Blade probably retouched to a sharpened end at bulbar end.

max length	97.9	max width	21.6	retouch			
width(quarter)	18.1	thickness(quarter)	4.9			termination	feathered
width(half)	23.1	thickness(half)	5.1			blade part	complete
width(3 quarter)	20.8	thickness(3 quarter)	5.5			segmented/truncated	

wear	

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896.1908

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	10.7x2.1cm
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	tomb K5

date evidence	
references	Garstang and Sethe 1903, 15-16, pl. XXIV, p. XXV
description	Blade, some retouch at bulbar end?

max length	160	max width	18.4	retouch			
width(quarter)	16.2	thickness(quarter)	5.4			termination	feathered
width(half)	19	thickness(half)	6.3			blade part	complete
width(3 quarter)	19.2	thickness(3 quarter)	7.5			segmented/truncated	

wear	

PLACE	Hierokonpolis	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	Adams 1974
description	Green 1898-9 Excavations. Temple Group 127. Bifacial discoidal leaf shaped bifacial knife, Alternate marginal retouch

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Beni Hasan	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	core tablet	period	Middle Kingdom	size	4.5x4.5cm
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	grave 180

date evidence

references: Garstang 1907, 218. This is not listed in tomb contents 180 -tomb of Hetep V

description: Flake struck to revive the striking platform

max length	43	max width	44.3	retouch	
width(quarter)		thickness(quarter)	3.8	termination	
width(half)		thickness(half)	6.2	blade part	
width(3 quarter)		thickness(3 quarter)	5.2	segmented/truncated	

wear

PLACE	Dendera	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	knife, OK1	period	Old Kingdom?	size	24.1cm x 6cm
functional name		colour	mid brown/pinkish f	shape	
excavation no		house/tomb		context	tomb 401

date evidence

references

description: Petrie 1898 Excavation, Tomb 401. Notched handled knife, straight back, round tip, fine retouch. This is not mentioned in the 1900 publication of Dendera but is similar to another 5th Dynasty knife from the same site illustrated on pl. 20 and discussed on page 10.

max length	240	max width	60	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	knife, MK1	period	Middle Kingdom	size	219x50.5x7.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	level 156 over s

date evidence

references: Petrie 1902b, pl .XIX 84 gives 156 and 11

description: Round butt, one edge convex, other straight. Tip pointed, bifacial. Finely flaked, no sharpening.

max length	219	max width	50.5	retouch	
width(quarter)	47.1	thickness(quarter)	6.2	termination	
width(half)	50.5	thickness(half)	7.4	blade part	
width(3 quarter)	38.4	thickness(3 quarter)	5.8	segmented/truncated	

wear

PLACE	Mahasna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	flake	period	1IP	size	3.4x1.2cm
functional name		colour		shape	
excavation no		house/tomb		context	grave N476

date evidence	
references	Garstang 1903, 29-31, 36
description	Garstang 1901. Used flake, bulbar end missing.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	El Qab	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	blade, unretouched	period	Old Kingdom	size	8x1.2cm
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb		context	grave 166

date evidence	
references	Quibell 1898, 9-10, 18, pls. I 7 II, 18
description	

max length	79.8	max width	12.4	retouch	
width(quarter)	11.2	thickness(quarter)	3	termination	
width(half)	12.2	thickness(half)	3.2	blade part	complete
width(3 quarter)	11.1	thickness(3 quarter)	3.1	segmented/truncated	

wear	

PLACE	Eastern Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Seton Carr 1897-9. Crescentic knife.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Eastern Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	JAI 1898, 90-92				
description	Seton Carr blade with pointed tip from Eastern Desert 1897-8 .				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Dendera	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	knife, MK3	period	Middle Kingdom, 11th Dynasty	size	170x42.4x5.9
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	tomb of Inyotefik
date evidence					
references	Petrie, 1900, 65, pl XXII				
description	One side straight, one convex (ill defined handle), pointed tip, bifacial. No sharpening (straight edge on profile). Finely made.				

max length	170	max width	42.4	retouch	
width(quarter)	37.7	thickness(quarter)	4.7	termination	
width(half)	42.5	thickness(half)	5.8	blade part	
width(3 quarter)	36.8	thickness(3 quarter)	5.9	segmented/truncated	
wear					

PLACE	Beni Hasan	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	knife, MK3	period	1IP	size	13.5x3.8cm
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	grave 6
date evidence					
references	Garstang 1907, 107-211, fig. 96 (2). Page 36 suggests these tombs are 1st Intermediate Period-Middle Kingdom.				
description	Pointed tip, one side straight, other convex. Pointed butt. Bifacial. Seems unsharpened.				

max length	136	max width	37.5	retouch	
width(quarter)		thickness(quarter)	6.2	termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)	6.7	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908
simple name	arrowheads, bifacial	period	New Kingdom, 18th Dynasty	size	38x9.5
functional name		colour	light grey	shape	
excavation no		house/tomb		context	tomb D29D
date evidence					
references	Randall-MacIver and Mace 1902, 89 pl. XLVIII				
description	Barbed and tanged.				

max length	38	max width	9.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908
simple name	arrowhead, bifacial	period	New Kingdom, 18th Dynasty	size	36.7x8.7
functional name		colour	pink	shape	
excavation no		house/tomb		context	tomb D29D
date evidence					
references	Randall-MacIver and Mace 1902, 89 pl. XLVIII				
description	Barbed and tanged.				

max length	36.7	max width	8.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908
simple name	arrowhead, bifacial	period	New Kingdom, 18th Dynasty	size	28.5x8.8
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	tomb D29D
date evidence					
references	Randall-MacIver and Mace 1902, 89 pl. XLVIII				
description	Barbed and tanged.				

max length	28.5	max width	8.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908
simple name	arrowhead, bifacial	period	New Kingdom, 18th Dynasty	size	22.2x10
functional name		colour	beige	shape	
excavation no		house/tomb		context	tomb D29D
date evidence					
references	Randall-MacIver and Mace 1902, 89 pl .XLVIII				
description	Barbed and tanged.				

max length	22.2	max width	10	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Ihnasya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908
simple name	flake fragment	period	Middle Kingdom-Second Interm	size	34.8x33.2
functional name		colour	mid orange brown	shape	
excavation no		house/tomb		context	grave 14
date evidence	Ashmolean Record card states this is New Kingdom. The excavation report (Petrie 1905, 4) states that the burial precedes the 18th Dynasty temple but states the grave goods date them to after Dynasty 11. The flints are not listed among the grave goods.				
references	Petrie, 1904, 4. The flints are not listed in the report (Petrie 1904, 4, fig. IXa). The burials seem to date between XI and XVIII Dynasty. The objects associated with the burial as shown on fig.IXa of the publication, appear to be New Kingdom.				
description	Waste flake.				

max length	34.8	max width	33.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Ihnasya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908
simple name	blade, unretouched	period	Middle Kingdom-Second Interm	size	76.6x16.9x6.7
functional name	broad/intermediate	colour	light brown	shape	intermediate
excavation no		house/tomb		context	grave 14
date evidence	Ashmolean Record card states this is New Kingdom. The excavation report (Petrie 1905, 4) states that the burial precedes the 18th Dynasty temple but states the grave goods date them to after Dynasty 11. The flints are not listed among the grave goods.				
references	Petrie, 1904, 4. The flints are not listed in the report (Petrie 1904, 4, fig. IXa). The burials seem to date between XI and XVIII Dynasty. The objects associated with the burial as shown on fig.IXa of the publication, appear				
description	Excavated 1904. Evidence of hinge fracture from previous removal.				

max length	76.6	max width	15.6	retouch	
width(quarter)	15.6	thickness(quarter)	4.3	termination	
width(half)	16.9	thickness(half)	4	blade part	complete
width(3 quarter)	15.8	thickness(3 quarter)	6.7	segmented/truncated	
wear					

PLACE	Ihnasya	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	blade, retouched, lateral	period	Middle Kingdom-Second Interm	size	55x16.5x7.5
functional name	sickle	colour	light brown	shape	intermediate
excavation no		house/tomb		context	grave 14

date evidence: Ashmolean Record card states this is New Kingdom. The excavation report (Petrie 1905, 4) states that the burial precedes the 18th Dynasty temple but states the grave goods date them to after Dynasty 11. The flints are not listed among the grave goods.

references: Petrie, 1904, 4. The flints are not listed in the report (Petrie 1904, 4, fig. IXa). The burials seem to date between XI and XVIII Dynasty. The objects associated with the burial as shown on fig.IXa of the publication, appear to be New Kingdom.

description: Denticulated with gloss on dorsal side. Excavated 1904.

max length	55	max width	16.5	retouch	ventral
width(quarter)	15	thickness(quarter)	6.7	termination	
width(half)	14.8	thickness(half)	7.1	blade part	medial
width(3 quarter)	16.5	thickness(3 quarter)	7.5	segmented/truncated	segmented

wear: Gloss

PLACE	Raqaqna	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	blade, retouched, lateral	period	Old Kingdom	size	6.3x2.2cm
functional name	sickle	colour	light grey	shape	
excavation no		house/tomb		context	

date evidence:

references:

description: Garstang 1900-1. Blade with slight gloss. One end broken, other squared by retouch, retouch along back.

max length	60	max width	21.6	retouch	dorsal
width(quarter)	22.4	thickness(quarter)	6.7	termination	
width(half)	22.5	thickness(half)	5.2	blade part	medial
width(3 quarter)	18.8	thickness(3 quarter)	4.2	segmented/truncated	seg+trunc

wear: Gloss

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	razor, square	period	Old Kingdom, 3rd Dynasty	size	48.3x23x4.9
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	tomb K2

date evidence:

references: Garstang, Mahasna and Beth Khallaf p18, 11-14 pls XVII, XVIII, XX. The item is illustrated on pl.XX

description: Square ends.

max length	48.3	max width	23	retouch	
width(quarter)	21.3	thickness(quarter)	4.8	termination	
width(half)	19.6	thickness(half)	4.9	blade part	
width(3 quarter)	20.7	thickness(3 quarter)	4.2	segmented/truncated	

wear:

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	razor, square	period	Old Kingdom, 3rd Dynasty	size	5.1x3.1cm
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	tomb K2
date evidence					
references	Garstang, Mahasna and Bet Khallaf p18, plXX; 11-14 pls XVII, XVIII. The item is illustrated on pl. XX				
description	Square ends.				

max length	49.5	max width	30.9	retouch	
width(quarter)	26.1	thickness(quarter)	5.3	termination	
width(half)	26.1	thickness(half)	5.5	blade part	
width(3 quarter)	29.3	thickness(3 quarter)	6.4	segmented/truncated	
wear					

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	7.5x2.2cm
functional name	broad/intermediate	colour	mid brown	shape	irregular
excavation no		house/tomb		context	tomb K2
date evidence					
references	Garstang Mahasna, and Bet Khallaf p11-14 pls XVII, XVIII				
description	Unretouched cortical blade.				

max length	74.9	max width	21.8	retouch	
width(quarter)	17.1	thickness(quarter)	3.9	termination	feathered
width(half)	21	thickness(half)	4.5	blade part	complete
width(3 quarter)	21.8	thickness(3 quarter)	5.2	segmented/truncated	
wear					

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908

simple name	blade, retouched, lateral	period	Old Kingdom, 3rd Dynasty	size	6.3x2.2cm
functional name	sickle	colour	mid grey	shape	
excavation no		house/tomb		context	tomb K2
date evidence					
references	Garstang, Mahasna and Beth Khallaf p11-14 pls XVII, XVIII				
description	Sickle blade with gloss. Tomb of Hen-Nakht, Bet Khallaf, 1906. One end broken while the other end shows steep retouch on the dorsal side. Denticulation and gloss on the dorsal side.				

max length	62.1	max width	21.7	retouch	both
width(quarter)	21.4	thickness(quarter)	5.9	termination	
width(half)	20.9	thickness(half)	6.1	blade part	medial
width(3 quarter)	20.4	thickness(3 quarter)	6	segmented/truncated	seg+trunc
wear	Gloss				

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1896-1908
simple name	razor, square	period	Old Kingdom, 3rd Dynasty	size	65.4x26.9x7.6
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	tomb K5
date evidence					
references	Garstang, Mahasna and Bet Khallaf p15-16 pls XXIV and XXV				
description	Double endscraper with squared ends, retouch across both ends.				

max length	65.4	max width	26.9	retouch	dorsal
width(quarter)	24.5	thickness(quarter)	5.9	termination	
width(half)	25.7	thickness(half)	6.8	blade part	
width(3 quarter)	26.9	thickness(3 quarter)	7.6	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1914.675
simple name	knife fragment	period	Middle Kingdom	size	10 x4.5cm
functional name		colour		shape	
excavation no		house/tomb		context	town site, kahun
date evidence					
references	Petrie 'Lahun II' p41, pl XXXIII				
description	Broken knife fragment wrapped in cord.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1914.772
simple name	blade, retouched, lateral	period	Middle Kingdom, 11th Dynasty	size	8.4x1.8cm
functional name	sickle	colour		shape	narrow
excavation no		house/tomb		context	Haraga 530
date evidence					
references	Englebach 'Harageh' p17. 7 Flint flakes were found in the house ruin which contained Tell el Yahudiyeh ware, etc. and scarabs with the name of Mentuhotep II.				
description	Ventral denticulations along lateral edge. Ventral and dorsal gloss. Pointed at one end, retouch at other. 1914 excavations.				

max length	84	max width	17	retouch	ventral
width(quarter)	14.4	thickness(quarter)	5.2	termination	
width(half)	16.3	thickness(half)	5.2	blade part	
width(3 quarter)	17.4	thickness(3 quarter)	5.1	segmented/truncated	truncated
wear	Gloss				

PLACE	Harageh	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1914.773
simple name	blade, retouched, lateral	period	Middle Kingdom, 11th Dynasty	size	8.4x1.8cm
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	Haraga 530
date evidence					
references	Englebach 'Harageh' p17. 7 flint flakes were found in the house ruin which contained Tell el Yahudiyeh ware, etc. and scarabs with the name of Mentuhotep II.				
description	Ventral denticulations. Dorsal and ventral gloss. Pointed at one end, retouch at other. 1914 excavations.				

max length	85.4	max width	4.1	retouch	ventral
width(quarter)	11.3	thickness(quarter)	4.1	termination	
width(half)	13.6	thickness(half)	4.2	blade part	
width(3 quarter)	14.1	thickness(3 quarter)	4.2	segmented/truncated	seg+trunc
wear	Gloss				

PLACE	Harageh	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1914.774
simple name	blade, retouched, lateral	period	Middle Kingdom, 11th Dynasty	size	8.4x1.8cm
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	Haraga House r
date evidence					
references	Englebach 'Harageh' p17. 7 flint flakes were found in the house ruin which contained Tell el Yahudiyeh ware, etc. and scarabs with the name of Mentuhotep II.				
description	Serrated and showing gloss. Backed along lateral edge, broken at one end and retouch at other. 1914 excavations.				

max length	77.1	max width	15.8	retouch	dorsal
width(quarter)	11.5	thickness(quarter)	3.2	termination	
width(half)	14.5	thickness(half)	3.6	blade part	
width(3 quarter)	14	thickness(3 quarter)	3.3	segmented/truncated	seg+trunc
wear	Gloss				

PLACE	Harageh	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1914.775
simple name	blade, unretouched	period	Middle Kingdom, 11th Dynasty	size	120x13.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	Haraga 530
date evidence					
references	Englebach 'Harageh' p17. 7 flint flakes were found in the house ruin which contained Tell el Yahudiyeh ware, etc. and scarabs with the name of Mentuhotep II.				
description	Blade worn at one end, pointed at bulbar end.				

max length	120	max width	13.2	retouch	
width(quarter)	10.7	thickness(quarter)	6.4	termination	
width(half)	13.2	thickness(half)	5.5	blade part	
width(3 quarter)	13.2	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1921.1394.

simple name	cores, discoidal	period	Middle Kingdom	size	89.6x65.4x32
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	Petrie et al. 1923, 21, pl XXXIX 104.
description	discoidal with flakes removed, cortex remaining.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1921.1394.

simple name	cores, discoidal	period	Middle Kingdom	size	76.2x58x26.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	Petrie et al. 1923, 21, pl XXXIX 104.
description	Discoidal with flakes removed, cortex remaining.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1921.1394.

simple name	cores, discoidal	period	Middle Kingdom	size	88.2x75.3x37.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	Petrie et al. 1923, 21, pl XXXIX 104.
description	Discoidal with flakes removed, cortex remaining.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Qau	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1923.548a

simple name	borer	period	2IP	size	4.3x1.5cm
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	grave 1304

date evidence	
references	Brunton 1930, pl. V.
description	Broken backed blade with signs of use.

max length	42	max width	13.7	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Qau	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1923.548b

simple name	hollow scraper	period	2IP	size	5x2.1cm
functional name		colour	black	shape	
excavation no		house/tomb		context	grave 1304

date evidence	
references	Brunton 1930, pl. V.
description	Hollow scraper, notch with signs of use at tip.

max length	48.4	max width	20.8	retouch	both		
width(quarter)	14.1	thickness(quarter)	5			termination	
width(half)	21.2	thickness(half)	8			blade part	proximal
width(3 quarter)	18.2	thickness(3 quarter)	5.9			segmented/truncated	

wear	

PLACE	Qau	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1923.548c

simple name	blade, unretouched	period	2IP	size	7x1.3cm
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	grave 1304

date evidence	
references	Brunton 1930, pl. V
description	Signs of use.

max length	69.4	max width	13.1	retouch			
width(quarter)	12	thickness(quarter)	3.7			termination	
width(half)	12.2	thickness(half)	4.6			blade part	proximal
width(3 quarter)	13.1	thickness(3 quarter)	3.6			segmented/truncated	

wear	

PLACE	Qau	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1923.548d

simple name	blade, unretouched	period	2IP	size	3.9x1.1cm
functional name		colour	dark brown	shape	irregular
excavation no		house/tomb		context	grave 1304
date evidence					
references	Brunton 1930, pl. V				
description	Blade with cortex Labeled 23/1304.				

max length	39.3	max width	10	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.301 a

simple name	crescentic drill bit	period	Middle Kingdom	size	22.8x21.5x7.6
functional name		colour	light brown	shape	
excavation no		house/tomb		context	temple worksho
date evidence					
references	Caton-Thompson and Gardner, 1934, 129				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.301

simple name	crescentic drill bit	period	Middle Kingdom	size	24.2x26.1x9.4
functional name		colour	light and mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner, 1934, 129				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.301 c

simple name	crescentic drill bit	period	Middle Kingdom	size	31x25.6x14
functional name		colour	mottled light and mi	shape	
excavation no		house/tomb		context	

date evidence

references: Caton-Thompson and Gardner, 1934, 129

description

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.301

simple name	crescentic drill bit	period	Middle Kingdom	size	26.4x23.5x12.3
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references: Caton-Thompson and Gardner, 1934, 129

description: Broken wing.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1

simple name	crescentic drill bit	period	Middle Kingdom	size	29.8x24x12.5
functional name		colour	mid-brown	shape	
excavation no		house/tomb		context	

date evidence

references: Caton-Thompson and Gardner, 1934, 2

description

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/2
simple name	crescentic drill bit	period	Middle Kingdom	size	22x16.4x16.1
functional name		colour	mid-brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner, 1934, 2				
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/3
simple name	crescentic drill bit	period	Middle Kingdom	size	23.2x21.2x10.4
functional name		colour	mid-brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner, 1934, 2				
description	Very worn base.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/4
simple name	crescentic drill bit	period	Middle Kingdom	size	27x22x10.7
functional name		colour	mid-brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner, 1934, 2				
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/5

simple name	crescentic drill bit	period	Middle Kingdom	size	26.8x21.3x6.6
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/6

simple name	crescentic drill bit	period	Middle Kingdom	size	27.3x26x0.96
functional name		colour	mid-brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/7

simple name	crescentic drill bit	period	Middle Kingdom	size	25x20.5x10.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/8
simple name	crescentic drill bit	period	Middle Kingdom	size	36.2x24.5x11
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/9
simple name	crescentic drill bit	period	Middle Kingdom	size	28.7x25.4x13.2
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934 2				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	32.5x30.5x9.4
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	57.1x48.7x15.3
functional name		colour	mid-brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description	Cortex on dorsal side.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	32.6x43.4x11
functional name		colour	mid grey-brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	27.4x27x11
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	35.4x26.2x7.3
functional name		colour	very dark brown, m	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	35.2x29.8x13.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner, 1934, 2				
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	44.9x27.3x14.3
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description	Cortex on both sides.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	crescentic drill bit	period	Middle Kingdom	size	28.3x30x9.8
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	Y drill bit	period	Middle Kingdom	size	54.2x17.2
functional name		colour	red quartz	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description	Striations on edge caused by drilling.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qasr el-Sagh, Desert	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1925.425/1
simple name	Y drill bit	period	Middle Kingdom	size	58x2.5
functional name		colour	white quartz	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 2				
description	Striations on edge caused by drilling.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Desert Fayum SE Ca	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.282

simple name		period	Old Kingdom?	size	
functional name		colour	grey flint (heavy pat	shape	
excavation no	198	house/tomb		context	

date evidence

references: Caton-Thompson and gardner 1934, 125

description: Unilateral notch handle, bifacial.

max length	119	max width	35.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Desert Fayum, Qasr	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.290

simple name	leaf shaped scraper/knife	period	Old Kingdom? Middle Kingdom	size	63.8x30.5x4.8
functional name		colour	mid brown	shape	
excavation no	845	house/tomb		context	

date evidence

references: BSAE 1926, Caton-Thompson and Gardner 1934, 126

description: ?unifacially worked, leaf shaped. Thinned on dorsal side, retouched dorsal and ventral sides. At Giza dated to 4th Dynasty check Gizeh and Rifeh pl iiia

max length	63.8	max width	30.5	retouch	dorsal and ventral (thinned on dorsal sid
width(quarter)	29.5	thickness(quarter)	5	termination	
width(half)	30.2	thickness(half)	4.8	blade part	
width(3 quarter)	25.4	thickness(3 quarter)	5.1	segmented/truncated	

wear

PLACE	Desert Fayum, s side	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.291

simple name		period	Old Kingdom?	size	105x20.8x8
functional name		colour	dark reddish brown	shape	
excavation no	1252	house/tomb		context	

date evidence

references: Caton-Thompson and Gardner 1934, 82.

description: Blade.

max length	105	max width	23.1	retouch	dorsal, and light ventral retouch or tramp
width(quarter)	23.1	thickness(quarter)	7	termination	broken
width(half)	20.8	thickness(half)	8	blade part	distal
width(3 quarter)	20.8	thickness(3 quarter)	7	segmented/truncated	segmented

wear

PLACE	Desert Fayum, s side	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.292

simple name	blade, endscraper	period	Old Kingdom?	size	104x21,4x7.6
functional name	broad/intermediate	colour	mid grey-brown	shape	intermediate
excavation no	1244	house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner 1934, 82.				
description	Chunky pointed blade.				

max length	104	max width	21.4	retouch	dorsal and ventral
width(quarter)	19.9	thickness(quarter)	5.5	termination	retouched
width(half)	20	thickness(half)	7.6	blade part	complete
width(3 quarter)	16	thickness(3 quarter)	8	segmented/truncated	
wear					

PLACE	Desert Fayum, Qasr	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.294

simple name	knife	period	Old Kingdom? Middle Kingdom	size	10.7x3.2cm
functional name		colour	very light grey/crea	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton-Thompson and Gardner, 1934, 125				
description	Bifacial knife, average thickness 8.2, sinious edge on profile.				

max length	108	max width	31.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Desert Fayum, Qasr	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.296

simple name	leaf shaped scraper/knife	period	Old Kingdom? Middle Kingdom	size	6.8 x 4.5cm
functional name		colour	grey flint	shape	
excavation no		house/tomb		context	
date evidence					
references	Caton Thompson and Gardner 1934, 126				
description	Leaf shaped knife.				

max length	67.4	max width	45.3	retouch	dorsal (also dprsal thinning)
width(quarter)	42.3	thickness(quarter)	7.3	termination	retouched
width(half)	45.5	thickness(half)	7	blade part	complete
width(3 quarter)	35	thickness(3 quarter)	5.1	segmented/truncated	
wear					

PLACE	Qasr el-Sagha	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.297

simple name	blade, segmentedl	period	Old Kingdom?	size	60x18x4.5
functional name		colour	grey flint	shape	
excavation no	288	house/tomb		context	site R

date evidence	
references	Caton-Thompson and Gardner 1934, 123-132
description	Trapezoidal blade with patina covering ventral side.

max length	60	max width	18	retouch	ventral		
width(quarter)	17.5	thickness(quarter)	3.6			termination	broken
width(half)	17.1	thickness(half)	4.5			blade part	medial
width(3 quarter)	15	thickness(3 quarter)	4.8			segmented/truncated	segmented

wear	

PLACE	Desert Fayum, site Z	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.326

simple name		period	Old Kingdom?	size	
functional name		colour	light-mid grey flint	shape	
excavation no	862	house/tomb		context	

date evidence	
references	Caton-Thompson and Gardner 1934, 125
description	

max length	101	max width	34.5	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1926.334

simple name	blade, retouched, notche	period	Old Kingdom	size	74.2x16x5
functional name	broad/intermediate	colour	dark grey/brown	shape	intermediate
excavation no	892	house/tomb		context	N shore L

date evidence	
references	Caton-Thompson and Gardner 1934 128.
description	Notched blade with largely triangular cross section.

max length	74.2	max width	16	retouch	dorsal		
width(quarter)	12.6	thickness(quarter)	4.6			termination	hinged and reto
width(half)	14.9	thickness(half)	5			blade part	
width(3 quarter)	15.2	thickness(3 quarter)	3.9			segmented/truncated	

wear	

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927. 3166

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	John Evans Collection (Seton Carr).

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927. 3172

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	John Evans Collection (Seton Carr).

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927. 3185

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	John Evans Collection (Seton Carr).

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos, Temenos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.239G

simple name	knife fragement	period	Old Kingdom?	size	97.7x60.8x7.3
functional name		colour	light-mid grey flint	shape	
excavation no		house/tomb		context	

date evidence

references: Petrie, 1902b, ii

description: Fragment of distal end of knife. Bifacial. Semi abrupt retouch along edge on one face.

max length	97.7	max width	60.8	retouch	
width(quarter)		thickness(quarter)	7.3	termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	el-Amra	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.2989

simple name	knife	period	Old Kingdom?	size	
functional name		colour	grey flint	shape	
excavation no		house/tomb		context	

date evidence

references

description: Sub rectangular. 1898. John Evans Collection.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Gebel esh-Sheikh E	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.2993

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description: John Evans Collection, triangular bifacial knife.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Dendera	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.2998

simple name	knife	period	Old Kingdom?			size	
functional name			colour			shape	
excavation no			house/tomb			context	

date evidence	
references	
description	John Evans Collection.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3004

simple name	blade, unretouched	period	Old Kingdom, 4th Dynasty			size	11.1x2.8cm
functional name	broad/intermediate		colour	mid brown		shape	broad
excavation no			house/tomb			context	Meidum 18

date evidence	
references	
description	From well of tomb. Double endscraper, round end (retouch). Goes with 1927.3005.

max length	112	max width	24.8	retouch	dorsal		
width(quarter)	18.5	thickness(quarter)				termination	
width(half)	22.3	thickness(half)				blade part	complete
width(3 quarter)	24.7	thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3005

simple name	blade, unretouched	period	Old Kingdom, 4th Dynasty			size	9.5x3.6cm
functional name	broad/intermediate		colour	mid brown		shape	intermediate
excavation no			house/tomb			context	Meidum 18

date evidence	
references	
description	From well of tomb. Double endscraper, round end (retouch), white patina. Goes with 1927.3004.

max length	94	max width	35.7	retouch	dorsal		
width(quarter)	25.8	thickness(quarter)				termination	
width(half)	30.3	thickness(half)				blade part	complete
width(3 quarter)	35.3	thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3139

simple name	blade, segmented, retou	period	Middle Kingdom	size	67.3x14.5
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	town

date evidence

references: Petrie et al. 1890, 29.

description: Denticulated blade retouched at proximal end (or platform preparation). Broken at distal end. Labelled 'MEDINET KAHUN PETRIE 1889'

max length	67.3	max width	14.5	retouch	
width(quarter)	14.4	thickness(quarter)	3.7	termination	
width(half)	14.7	thickness(half)	3.4	blade part	proximal
width(3 quarter)	14.6	thickness(3 quarter)	3.4	segmented/truncated	segmented

wear: Possible smoothing at proximal end

PLACE	Kahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3140

simple name	sickle, end	period	Middle Kingdom	size	50.7x16.3
functional name	sickle	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	town

date evidence

references: Petrie et al. 1890, 29.

description: Blade, broken at proximal end, feathered distal end. Labeled 'MEDINET KAHUN PETRIE 1889'.

max length	50.7	max width	16.6	retouch	both
width(quarter)	12.7	thickness(quarter)	4.8	termination	feathered
width(half)	14.9	thickness(half)	5.7	blade part	distal
width(3 quarter)	16.3	thickness(3 quarter)	4.5	segmented/truncated	segmented

wear

PLACE	Kahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3141

simple name	blade, retouched, lateral	period	Middle Kingdom	size	50.1x15.2
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	town

date evidence

references: Petrie et al. 1890, 29.

description: Sickle blade with gloss, broken at one end, steep retouch at other.

max length	50.1	max width	15.1	retouch	dorsal
width(quarter)	11.6	thickness(quarter)	3.5	termination	
width(half)	13	thickness(half)	3.6	blade part	
width(3 quarter)	15.2	thickness(3 quarter)	3.9	segmented/truncated	seg+trunc

wear: Gloss

PLACE	Kahun	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3142

simple name	blade, retouched, lateral	period	Middle Kingdom			size	54.8x10.1
functional name	sickle			colour	mid brown	shape	narrow
excavation no				house/tomb		context	town

date evidence	
references	Petrie et al. 1890, 29.
description	Sickle blade with triangular cross-section and gloss on dorsal facet. Dorsal and ventral retouch.

max length	54.8	max width	10	retouch	both		
width(quarter)	9.8	thickness(quarter)	3.2			termination	
width(half)	9.9	thickness(half)	3.4			blade part	medial
width(3 quarter)	10.1	thickness(3 quarter)	3			segmented/truncated	segmented

wear	Gloss

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3163

simple name	knife	period	Old Kingdom?			size	
functional name				colour		shape	
excavation no				house/tomb		context	

date evidence	
references	
description	John Evans Collection (Seton Carr).

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3164

simple name	knife	period	Old Kingdom?			size	
functional name				colour		shape	
excavation no				house/tomb		context	

date evidence	
references	
description	John Evans Collection (Seton Carr).

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3186

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	John Evans Collection (Seton Carr).				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Fayum	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1927.3220

simple name	knife	period	Old Kingdom?	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	John Evans Collection (Seton Carr).				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.239H

simple name	knife, fragment	period	Old Kingdom?	size	100.3x47.5x7.8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1902b, ii				
description	Knife tip, bifacial. Curved end as though sharpened with blade point pointing away from sharpener Seitenbezogenheit				

max length	100	max width	47.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos, Temenos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.239I

simple name	knife, fragment	period	Old Kingdom?	size	8.2x4.2cmx0.8
functional name		colour		shape	
excavation no		house/tomb		context	Temenos

date evidence	
references	Petrie 1902b, ii
description	Knife fragment, bifacial, alternate semi-abrupt marginal retouch. Flatter on one side than the other. Sharpened with point away from sharpener? Marked Temenos, Abydos 1902. Seitenbezogenheit.

max length	85	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	8.3			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.239K

simple name	knife, fragment	period	Old Kingdom?	size	9.1x5.1cm
functional name		colour	mottled brown and	shape	
excavation no		house/tomb		context	Temenos

date evidence	
references	Petrie 1902b, ii
description	Knife fragment bifacial, alternate semi-abrupt marginal retouch on back. Edge sharpened with blade pointing away from sharpener. Marked 'Temenos Abydos 1902' Seitenbezogenheit

max length	91.5	max width	60	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.5			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Abydos, Temenos	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.239L

simple name	knife, fragment	period	Old Kingdom?	size	7.5cm x 4.3cm
functional name		colour	light brown	shape	
excavation no		house/tomb		context	Temenos

date evidence	
references	Petrie 1902b, ii
description	Knife fragment, bifacial, alternate semi-abrupt marginal retouch along one edge and steep retouch along the other. Marked Temenos Abysos, 1902

max length	62.8	max width	40.9	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	7			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Mahasna	MUSEUM	Ashmolean	MUSEUM NO.	Asmolean 1959.303
simple name	pebbles(3)	period	Predynastic	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang 1903, 7, pl.5				
description	Naturally shaped pebbles				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.302E
simple name	knife, fragment	period	Old Kingdom, 3rd Dynasty?	size	7.8x4.8cm
functional name		colour	white	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife fragment. Bifacial. Ill formed handle? Garstangs excavations 1900-1.				

max length	78.7	max width	47.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	18.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.304/1
simple name	crescentic drill bit	period	Old Kingdom	size	81.4x44.8x32.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	near tomb K1
date evidence					
references	Garstang and Sethe 1903, pl. XV (row 2, no 5 from top, and row 4 no 2 from top)				
description					

max length	81.4	max width	44.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	32.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear	Worn				

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.304/2

simple name	crescentic drill bit	period	Old Kingdom	size	73.5x55.6x20.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	near tomb K1

date evidence	
references	Garstang and Sethe 1903, pl. XV (row 2, no 5 from top, and row 4 no 2 from top)
description	

max length	73.5	max width	55.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	20.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	Worn

PLACE	Bet Khallaf	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1959.304/3

simple name	crescentic drill bit	period	Old Kingdom	size	86.4x43.3x24.2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	near tomb K1

date evidence	
references	Garstang and Sethe 1903, pl. XV (row 2, no 5 from top, and row 4 no 2 from top)
description	

max length	86.4	max width	43.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	24.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Hierakonpolis	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1961.448

simple name	microdrills (21)	period	Old Kingdom	size	c. 19
functional name		colour	light grey	shape	
excavation no		house/tomb		context	temple area in w

date evidence	
references	Quibell and Green 1902, 11-12.
description	Made on flakes. 9 are complete, 8 of which are shaped to a point at the distal end.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Saqqara	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1971.52
simple name	blade, unretouched/inter	period	Old Kingdom	size	3.0x10.1cm
functional name	Intermediate	colour	brown (pinkish like	shape	broad
excavation no		house/tomb		context	tomb 3508

date evidence	
references	Emery 1964-5.
description	Double end scraper. Sides used.

max length	110	max width	29.9	retouch	dorsal		
width(quarter)	29.9	thickness(quarter)	6.5			termination	retouched
width(half)	29.8	thickness(half)	7.4			blade part	complete
width(3 quarter)	27.6	thickness(3 quarter)	8.3			segmented/truncated	

wear	

PLACE	Saqqara	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1971.53
simple name	blade, retouched/Interme	period	Old Kingdom, 5th Dynasty	size	55.5x20.1x18.9
functional name	Intermediate	colour	brown (ginger)	shape	intermediate
excavation no	67	house/tomb		context	tomb 3509

date evidence	
references	Emery 1964-5 JEA LI 4. Broken blade
description	Retouch at rounded end. Trapezoidal blade.

max length	55.5	max width	20.1	retouch	dorsal (mainly, a little on ventral area op		
width(quarter)	18.8	thickness(quarter)	7.5			termination	retouched
width(half)	18.9	thickness(half)	8.9			blade part	distal
width(3 quarter)	18.1	thickness(3 quarter)	8.9			segmented/truncated	

wear	

PLACE	Saqqara	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1971.55
simple name	scraper	period	Old Kingdom, 3rd Dynasty	size	31x29.2x5
functional name		colour	light brown/grey se	shape	
excavation no	248	house/tomb		context	tomb 3510

date evidence	
references	Emery 1964-5, JEA LI 5-6
description	Crescent shaped scraper, steep retouch round convex back, nibbled retouch along edge. Marked '3510-53 248'.

max length	31	max width	29.2	retouch	dorsal (3 edgesd), ventral (1 edge)		
width(quarter)	27.9	thickness(quarter)	5.4			termination	
width(half)	28.5	thickness(half)	5.4			blade part	
width(3 quarter)	26.4	thickness(3 quarter)	8.3			segmented/truncated	

wear	

PLACE	Saqqara	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1971.56

simple name	blade, unretouched	period	Old Kingdom			size	
functional name	narrow			colour	pale brown/grey	shape	
excavation no	351 and 358			house/tomb		context	tomb 3512

date evidence	
references	Emery 1965-65 excavation
description	Blade. The facetting on the proximal end is assumed to be platform preparation. Marked '3512-1 358'.

max length	71.5	max width	12.3	retouch	dorsal		
width(quarter)	11.5	thickness(quarter)	5			termination	broken
width(half)	10.4	thickness(half)	5.9			blade part	proximal
width(3 quarter)	10.2	thickness(3 quarter)	5.1			segmented/truncated	segmented

wear	

PLACE	el-Kab	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1993.1000

simple name	axe, ceremonial	period	Old Kingdom			size	9.8x10.7cm
functional name				colour	basalt	shape	
excavation no				house/tomb		context	

date evidence	
references	
description	Sayce Bequest.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Qasr es_sagha	MUSEUM	Ashmolean	MUSEUM NO.	Ashmolean 1993.900

simple name	pick	period	Old Kingdom			size	
functional name				colour		shape	
excavation no				house/tomb		context	

date evidence	
references	
description	Sayce Bequest.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM55155

simple name	sickle flake	period	New Kingdom	size	6x3.12x0.46
functional name	sickle	colour	light creamy brown-	shape	
excavation no	21/416	house/tomb	N49.15 (1921)	context	Main City, 1921
date evidence					
references	Peet and Wooley 1923, 23, pl. XIII fig 1.1				
description	Creamy coloured stone. Traces of cortex, serrated edge, other backed. Gloss. Seems to have been made on a flake.				

max length	59.9	max width	30.7	retouch	ventral
width(quarter)	27.5	thickness(quarter)	5.7	termination	worked
width(half)	24.8	thickness(half)	5.5	blade part	medial
width(3 quarter)	21.5	thickness(3 quarter)	2.6	segmented/truncated	
wear	Gloss				

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM67638

simple name	1/11 flint flakes	period	New Kingdom	size	4.25x2.83x0.3c
functional name		colour	mid brown	shape	
excavation no	21/40	house/tomb	O48.17	context	Main City, South
date evidence					
references	Peet and Wooley 1923, 29 describes 11 flints. 7 have been identified here. The distribution list in Pete and Wooley list all 11 as going to the BM.				
description	Broken flake.				

max length	6.2	max width	28	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.1	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM67636

simple name	1/11 flint flakes	period	New Kingdom	size	4.28x3.95x0.4c
functional name		colour	mid brown	shape	
excavation no	21/40	house/tomb	O48.17	context	Main City, South
date evidence					
references	Peet and Wooley 1923, 29 describes 11 flints. 7 are identified here. The distribution list in Pete and Wooley list all 11 as going to the BM.				
description	Cortex on side, bulb of percussion. Hard hammer.				

max length	42.3	max width	42	retouch	
width(quarter)	31	thickness(quarter)	4	termination	hinged
width(half)	38.9	thickness(half)	4.2	blade part	
width(3 quarter)	36.6	thickness(3 quarter)	4.8	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM67634

simple name	1/11 flint flakes	period	New Kingdom			size	5.68x3.7x0.74c
functional name				colour	mid brown	shape	
excavation no	21/40			house/tomb	O48.17	context	Main City, South

date evidence	
references	Peet and Wooley 1923, 29 describes 11 flints. 7 have been identified here. The distribution list in Pete and Wooley list all 11 as going to the BM.
description	Cortex on side, bulb of percussion.

max length	57.4	max width	37.6	retouch			
width(quarter)	38.4	thickness(quarter)	7.2			termination	feathered
width(half)	36.3	thickness(half)	4.6			blade part	complete
width(3 quarter)	26	thickness(3 quarter)	4.2			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM67632

simple name	1/11 flint flakes (waste)	period	New Kingdom			size	7.4x3.84x1.1cm
functional name				colour	pale-mid brown	shape	
excavation no	21/40			house/tomb	O48.17	context	Main City, South

date evidence	
references	Peet and Wooley 1923, 29 describes 11 flints. 7 are identified here. The distribution list in Pete and Wooley list all 11 as going to the BM.
description	Cortex, bulb of percussion. Hard hammer.

max length	74.5	max width	41.7	retouch			
width(quarter)	35.8	thickness(quarter)	8.1			termination	feathered
width(half)	36.1	thickness(half)	6			blade part	complete
width(3 quarter)	41.2	thickness(3 quarter)	4.6			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM67635

simple name	1/11 flint flakes	period	New Kingdom			size	6.13x5.16x0.54c
functional name				colour	mid brown	shape	
excavation no	21/40			house/tomb	O48.17	context	Main City, South

date evidence	
references	Peet and Wooley 1923, 29 describes 11 flints. 7 have been identified here. The distribution list in Peet and Wooley list all 11 as going to the BM.
description	Cortex '15' in pencil.

max length	59	max width	53.8	retouch			
width(quarter)	27.5	thickness(quarter)	5.4			termination	feathered
width(half)	34.5	thickness(half)	4.9			blade part	complete
width(3 quarter)	52.8	thickness(3 quarter)	4			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM67637

simple name	blade	period	New Kingdom	size	5.38x2.83x0.46c
functional name		colour		shape	
excavation no	21/194a	house/tomb	O49.24	context	Main City South,
date evidence					
references	Peet and Woolley 1923, 30. House O.49.24. Another blades was found with this and is shown on plate XIII.6.				
description	Cortex. Hard hammer suggested by pronounced bulb.				

max length	36	max width	26.9	retouch	
width(quarter)	21.3	thickness(quarter)	4.1	termination	
width(half)	23	thickness(half)	4.5	blade part	proximal
width(3 quarter)	26.9	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM67633

simple name	1/11 flint flakes (waste fl	period	New Kingdom	size	6.83x3.78x0.39c
functional name		colour	mid brown	shape	
excavation no	21/40	house/tomb	O48.17	context	Main City, South
date evidence					
references	Peet and Wooley 1923, 29 describes 11 flints. 7 have been identified here. The distribution list in Pete and Wooley list all 11 as going to the BM.				
description	Cortex. Hard hammer.				

max length	46.4	max width	68.7	retouch	
width(quarter)	46.2	thickness(quarter)	5.2	termination	feathered
width(half)	66.8	thickness(half)	5.3	blade part	complete
width(3 quarter)	36.7	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM55156

simple name	end blade, sickle	period	New Kingdom	size	4.8x0.65x1cm
functional name	sickle, end	colour	creamy brown	shape	
excavation no	21/142	house/tomb	O49.24	context	Main City, 1921
date evidence					
references	Peet and Wooley 1923, 30, pl. XIV, fig 1, top 1				
description	Creamy coloured stone. Traces of cortex, serrated edge. Gloss. End sickle blade.				

max length	48	max width	20.5	retouch	dorsal
width(quarter)	17.1	thickness(quarter)	5.5	termination	
width(half)	13.9	thickness(half)	5.5	blade part	medial
width(3 quarter)	8.7	thickness(3 quarter)	4.5	segmented/truncated	
wear	Gloss				

PLACE	Amarna	MUSEUM	Egypt Centre	MUSEUM NO.	W1380

simple name	blade, sickle	period	New Kingdom	size	
functional name	sickle	colour		shape	
excavation no	TA 110 27-29	house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Egypt Centre	MUSEUM NO.	W1381

simple name	blade, sickle	period	New Kingdom	size	
functional name	sickle	colour		shape	
excavation no	TA 181 26-27	house/tomb		context	North Suburb
date evidence					
references	36.1 in the Amarna database compiled by Anna Stevens.				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Egypt Centre	MUSEUM NO.	W1382 (Distribution Li

simple name	blade, sickle	period	New Kingdom	size	6.5cm
functional name	sickle	colour		shape	
excavation no	28.9/123	house/tomb	U.36.48	context	North Suburb
date evidence					
references	In Anna Stevens database this item is from the North Suburb				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Egypt Centre	MUSEUM NO.	W1383

simple name	blade, sickle	period	New Kingdom			size	
functional name	sickle			colour		shape	
excavation no				house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Egypt Centre	MUSEUM NO.	W1384

simple name	blade, sickle	period	New Kingdom			size	
functional name	sickle			colour		shape	
excavation no				house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Egypt Centre	MUSEUM NO.	W1385

simple name	blade, sickle	period	New Kingdom			size	
functional name	sickle			colour		shape	
excavation no				house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Wadi Maghara, Sinai	MUSEUM	BM	MUSEUM NO.	BM37088

simple name	blade, retouched, lateral	period		size	5.4x2.2x0.43cm
functional name	sickle	colour	mid grey	shape	intermediate
excavation no	82 -7 11	house/tomb		context	
date evidence					
references					
description	Charles Kerr Macdonald collection. Blade, denticulated, sickle. Direct and inverse retouch, irregular. Possible remains of mastic. Proximal end with abrupt retouch, distal end broken. Sickle gloss on dorsal facet and ventral facet c1mm in. No edge on curve, trapezoidal cross-section.				

max length	54.2	max width	20.3	retouch	dorsal
width(quarter)	19	thickness(quarter)	13.3	termination	broken
width(half)	18.8	thickness(half)	14.1	blade part	proximal
width(3 quarter)	17.2	thickness(3 quarter)	14.6	segmented/truncated	segmented
wear					

PLACE	Wadi Maghara, Sinai	MUSEUM	BM	MUSEUM NO.	BM37021

simple name	blade/core	period		size	5.83x2.16x0.62c
functional name		colour		shape	irregular
excavation no	49 8-11 136	house/tomb		context	
date evidence					
references					
description	Charles Kerr Macdonald collection. Blade, remains of other blade removals.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Wadi Maghara, Sinai	MUSEUM	BM	MUSEUM NO.	BM37061

simple name	blade	period		size	
functional name		colour	mid-dark brown	shape	intermediate
excavation no	49 8-11 176	house/tomb		context	
date evidence					
references					
description	Charles Kerr Macdonald collection. Blade, retouched, prbably an awl. Distal end has been retouched and looks worn.				

max length	67.4	max width	15.6	retouch	
width(quarter)	12.7	thickness(quarter)	6	termination	
width(half)	14.9	thickness(half)	4.9	blade part	medial
width(3 quarter)	14.4	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Wadi Maghara, Sinai	MUSEUM	BM	MUSEUM NO.	BM37011

simple name	blade	period		size	
functional name		colour	mid grey	shape	broad
excavation no	49 8-11 126	house/tomb		context	

date evidence

references

description: Charles Kerr Macdonald collection. Blade, retouched along both long sides. Abrupt and scalar.

max length	48.1	max width	20.8	retouch	dorsal
width(quarter)	21.5	thickness(quarter)	9	termination	
width(half)	20	thickness(half)	8.4	blade part	medial
width(3 quarter)	20.3	thickness(3 quarter)	7.4	segmented/truncated	

wear

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM55153

simple name	blade, retouched, lateral	period	New Kingdom	size	5.6x1.08x0.34c
functional name		colour	very dark brown, gl	shape	narrow
excavation no	1921 10-8 87	house/tomb	tomb	context	

date evidence

references

description: Inverse and proximal retouch along both sides of blade. Edge on curved profile. From Egypt Exploration Society. Trample or wear along length

max length	56	max width	108	retouch	
width(quarter)	7.9	thickness(quarter)	3.1	termination	feathered
width(half)	10	thickness(half)	3.1	blade part	complete
width(3 quarter)	10.9	thickness(3 quarter)	3	segmented/truncated	

wear

PLACE	Amarna	MUSEUM	BM	MUSEUM NO.	BM58013

simple name	flake, retouched	period	New Kingdom	size	6.9x2.68x1.06c
functional name	sickle, end	colour	mid brown	shape	
excavation no	1925 10-13 58	house/tomb		context	

date evidence

references

description: End sickle? With gloss and traces of mastic. Acquired by BM 1925. Bulb of percussion flaked off. Made on a flake.

max length	68.3	max width	26	retouch	dorsal
width(quarter)	27	thickness(quarter)	11.5	termination	
width(half)	24.9	thickness(half)	8.9	blade part	medial
width(3 quarter)	16.2	thickness(3 quarter)	8	segmented/truncated	

wear: Gloss

PLACE	Upper Egypt	MUSEUM	BM	MUSEUM NO.	BM58562

simple name	blade, end scraper	period	Middle Kingdom	size	4.02x1.3x0.43c
functional name		colour	mid brown	shape	intermediate
excavation no	1926 7-28 135	house/tomb	tomb of Ankhu	context	
date evidence					
references					
description	Mid brown blade. Retouch at proximal end. Bulb of percussion chipped off. Marked '1818'. Tomb of Ankhu. From EES.				

max length	39.2	max width	13.2	retouch	dorsal
width(quarter)	11.8	thickness(quarter)	4.5	termination	broken
width(half)	12.4	thickness(half)	4.2	blade part	proximal
width(3 quarter)	13.5	thickness(3 quarter)	4.2	segmented/truncated	segmented
wear	Possible trample or wear				

PLACE	Upper Egypt	MUSEUM	BM	MUSEUM NO.	BM58563

simple name	blade, unretouched	period	Middle Kingdom	size	2.45x1.1x0.26c
functional name		colour	light grey/brown	shape	irregular
excavation no	1926 7-28 136	house/tomb	tomb of Ankhu	context	
date evidence					
references					
description	Blade with distal end broken. Said to be tomb of Ankhu. EES				

max length	25.3	max width	10.9	retouch	
width(quarter)	10	thickness(quarter)	2.9	termination	broken
width(half)	10.8	thickness(half)	2.9	blade part	proximal
width(3 quarter)	10.6	thickness(3 quarter)	2.3	segmented/truncated	segmented
wear					

PLACE	Thebes	MUSEUM	BM	MUSEUM NO.	BM22850

simple name	fish tail knife	period	New Kingdom	size	10.9x7.3x0.75c
functional name		colour		shape	
excavation no	91 519 23	house/tomb	tomb of Seti I	context	
date evidence					
references					
description	Fishtail knife. Type suggests a mistake made re. context.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	?	MUSEUM	BM	MUSEUM NO.	BM54526

simple name	knife, OK2	period		size	
functional name		colour		shape	
excavation no	1919 12-1 3	house/tomb		context	

date evidence

references

description Rough knife.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	?	MUSEUM	BM	MUSEUM NO.	BM74880

simple name	knife, OK2	period	Old Kingdom	size	
functional name		colour		shape	
excavation no	593	house/tomb		context	1993 5-22 30

date evidence

references

description Crescent shaped knife, mottled.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35205

simple name	axe	period	Old Kingdom?	size	9x9.5x2.88
functional name		colour		shape	
excavation no	1901 4-17 1	house/tomb		context	

date evidence

references

description Adze, axe or hoe from Wadi el Sheik. Seton-Carr collection. Broken and mended. Date of this site not clear.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35206

simple name	knife, OK7	period	Old Kingdom?	size	16.3x7.3x0.98c
functional name		colour	mid-dark brown	shape	
excavation no	1901 4-17 2	house/tomb		context	

date evidence

references

description: Leaf shaped knife. Seems to have been broken in antiquity. Wadi el Sheik, Seton-Carr. The date of this site is not clear. Traces of cortex. Fine retouch twoards the point on the side which would be the user's left.

max length	163	max width	73	retouch	
width(quarter)		thickness(quarter)	11	termination	
width(half)		thickness(half)	10.9	blade part	
width(3 quarter)		thickness(3 quarter)	9.1	segmented/truncated	

wear

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35207

simple name	knife	period	Old Kingdom?	size	
functional name		colour	dark brown	shape	
excavation no	1901 4-17 3	house/tomb		context	

date evidence

references

description: Knife blade without handle. Broken in antiquity. Traces of cortex. Curved edge-on profile. Sinious. Cutting edge 30 degrees. Roughish. The date of the site is not clear.

max length		max width		retouch	
width(quarter)		thickness(quarter)	8.1	termination	
width(half)		thickness(half)	6.5	blade part	
width(3 quarter)		thickness(3 quarter)	7.1	segmented/truncated	

wear

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35208

simple name	knife, OK7 or MK3	period	Old Kingdom?	size	17x4.83x10.46c
functional name		colour	mid-dark brown	shape	
excavation no	1901 4-17 4	house/tomb		context	

date evidence

references

description: Knife blade without handle. Broken in antiquity. Traces of cortex. Curved edge-on profile. Straight cutting edge. Cutting edge 30 degrees. Fine edge retouch on users' right. The date of the site is not clear

max length	170	max width	105	retouch	
width(quarter)		thickness(quarter)	8.4	termination	
width(half)		thickness(half)	13.7	blade part	
width(3 quarter)		thickness(3 quarter)	8.6	segmented/truncated	

wear

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35209

simple name	knife, OK8 or MK4	period	Old Kingdom?	size	16.2x4.72x0.78
functional name		colour	dark brown	shape	
excavation no	1901 4-17 5	house/tomb		context	
date evidence					
references					
description	Knife blade without handle. Broken in antiquity. The date of the site is not clear. Sub leaf shape. No handle. 30 degrees cutting edge fairly straight				

max length	162	max width	47.2	retouch	
width(quarter)		thickness(quarter)	8.8	termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)	7	segmented/truncated	
wear					

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35210

simple name	knife, OK5-6 or MK3	period	Old Kingdom?	size	13.88x3.86x0.78
functional name		colour	dark orange-brown	shape	
excavation no	1901 4-17 6	house/tomb		context	
date evidence					
references					
description	Knife blade without handle. Broken in antiquity. Traces of cortex near handle. The date of the site is not clear. 30 degree cutting edge. Sinious.				

max length	139	max width		retouch	
width(quarter)		thickness(quarter)	9.3	termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)	7.2	segmented/truncated	
wear					

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35211

simple name	knife	period	Old Kingdom?	size	11x5.5x1.1
functional name		colour	dark brown	shape	
excavation no	1901 4-17 7	house/tomb		context	
date evidence					
references					
description	Knife blade without handle. Broken in antiquity. Fairly rough flakes. The date of the site is not clear.				

max length	110	max width	50	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35212

simple name	knife	period	Old Kingdom?	size	10.42x6.2x1.8c
functional name		colour	dark brown	shape	
excavation no	1901 4-17 8	house/tomb		context	

date evidence

references

description: Knife blade without handle. Broken in antiquity. Sinious edge on profile. The date of the site is not clear.

max length	104	max width	62	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35213

simple name	knife	period	Old Kingdom?	size	8.74x4.3x0.9cm
functional name		colour	dark brown	shape	
excavation no	1901 4-17 9	house/tomb		context	

date evidence

references

description: Knife blade without handle. Broken in antiquity. Sinious edge on profile. The date of the site is not clear.

max length	87.4	max width	43	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Wadi el Sheik	MUSEUM	BM	MUSEUM NO.	BM35214

simple name	knife	period	Old Kingdom?	size	6.44x4.89x1.3c
functional name		colour	dark brown	shape	
excavation no	1901 4-17 10	house/tomb		context	

date evidence

references

description: Knife blade without handle. Broken in antiquity. The date of the site is not clear. Sub leaf shape. No handle. 30 degrees cutting edge fairly straight

max length	64.4	max width	48.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Wadi Maghara, Sinai	MUSEUM	BM	MUSEUM NO.	BM36724

simple name	blade	period		size	2.68x1.86x0.65c
functional name		colour	mid grey	shape	
excavation no	49 8-11 180	house/tomb		context	

date evidence

references

description: Charles Kerr Macdonald collection. Blade. Mesial section only. Prismatic.

max length	26	max width	18.5	retouch	
width(quarter)	17.4	thickness(quarter)	14.2	termination	broken both end
width(half)	17.4	thickness(half)	14.8	blade part	medial
width(3 quarter)	18.7	thickness(3 quarter)	16.5	segmented/truncated	segmented

wear

PLACE	Mostagedda	MUSEUM	BM	MUSEUM NO.	BM63279

simple name	blade, end scraper?	period	2nd IP	size	5.3x1.51x2.8cm
functional name		colour	mid pinkish brown	shape	intermediate
excavation no	1930 7-11 302	house/tomb	tomb 3203	context	

date evidence

references: Brunton 1937, 118, fig. LXXIV

description: Pan Grave 3203. Brunton expedition. Prismatic. Reddish brown deposit.

max length	53.2	max width	15	retouch	
width(quarter)	14.8	thickness(quarter)	2.9	termination	feathered
width(half)	3.55	thickness(half)	2	blade part	complete
width(3 quarter)	14.5	thickness(3 quarter)	1.6	segmented/truncated	

wear

PLACE	Mostagedda	MUSEUM	BM	MUSEUM NO.	BM63280

simple name	blade, unretouched	period	2nd IP	size	3.1x0.9x0.16cm
functional name		colour	mid orange brown	shape	irregular
excavation no	1930 7-11 303	house/tomb		context	

date evidence

references: Brunton 1937, 118, fig. LXXIV

description: Pan Grave 3203. Brunton expedition.

max length	30	max width	8.8	retouch	
width(quarter)	6.8	thickness(quarter)	1.1	termination	feathered
width(half)	5.4	thickness(half)	1.3	blade part	complete
width(3 quarter)	5.3	thickness(3 quarter)	1.5	segmented/truncated	

wear

PLACE	Mostagedda	MUSEUM	BM	MUSEUM NO.	BM63336

simple name	blade, unretouched	period	2nd IP			size	
functional name			colour	mid brown (striated		shape	narrow
excavation no	1930 7-11 359		house/tomb			context	

date evidence	
references	Brunton 1937, 118, fig. LXXIV
description	Pan Grave 3203. Brunton expedition. Triangular cross section. Remains of cortex. Curved. Brown orange deposit as 63279

max length	65.9	max width	12.8	retouch			
width(quarter)	12.8	thickness(quarter)	6.4			termination	feathered
width(half)	12	thickness(half)	6.8			blade part	complete
width(3 quarter)	8.6	thickness(3 quarter)	5.8			segmented/truncated	

wear	

PLACE	Mostagedda	MUSEUM	BM	MUSEUM NO.	BM63278

simple name	flake	period	2nd IP			size	6.11x4.89x0.49
functional name			colour			shape	
excavation no	1930 7-11 301		house/tomb	tomb 3203		context	

date evidence	
references	Brunton 1937, 118, fig. LXXIV
description	Pan Grave 3203. Brunton expedition. Flake with remains of cortex.

max length	48	max width	42	retouch			
width(quarter)	28.2	thickness(quarter)	4.1			termination	slight hinge
width(half)	40	thickness(half)	3.1			blade part	complete
width(3 quarter)	40.2	thickness(3 quarter)	2.5			segmented/truncated	

wear	

PLACE	Mostagedda	MUSEUM	BM	MUSEUM NO.	BM63277

simple name	flake	period	2nd IP			size	0.43x7.8x5.6cm
functional name			colour	mid brown		shape	
excavation no	1930 7-11 300		house/tomb	tomb 3203		context	

date evidence	
references	Brunton 1937, 118, fig. LXXIV
description	Pan Grave 3203. Brunton expedition. Flake. Remains of cortex.

max length	80.5	max width	67	retouch			
width(quarter)	54	thickness(quarter)	5			termination	feathered
width(half)	45.4	thickness(half)	4.4			blade part	complete
width(3 quarter)	45.9	thickness(3 quarter)	4.2			segmented/truncated	

wear	

PLACE	Mostagedda	MUSEUM	BM	MUSEUM NO.	BM63276

simple name	flake	period	2nd IP	size	7.96x5.25x0.45c
functional name		colour	mid brown	shape	
excavation no	1930 7-11 299	house/tomb	tomb 3203	context	

date evidence	
references	Brunton 1937, 118, fig. LXXIV
description	Pan Grave 3203. Brunton expedition. Thin flake. Remains of cortex. Curved.

max length	79	max width	53.1	retouch			
width(quarter)	35.8	thickness(quarter)	4.5			termination	feathered
width(half)	51	thickness(half)	4.9			blade part	complete
width(3 quarter)	43.6	thickness(3 quarter)	3.6			segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM4768

simple name	axe, MK3	period	Middle Kingdom, 12th Dynasty	size	
functional name		colour		shape	
excavation no	15.10.90	house/tomb	4768	context	

date evidence	
references	Petrie 1891, 12, 51-52, pl. 7 no 3. This is very similar to the Middle Kingdom axe from Haragheh. See Engelbach 1923 p11, plVII, 11
description	

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67642

simple name	axe, MK3	period	Middle Kingdom, 12th Dynasty	size	
functional name		colour	hornstone or basalt	shape	
excavation no	15.10.90	house/tomb	4769	context	

date evidence	
references	Petrie 1891, 12, 51-52, pl. 7 no4. Ceremonial?
description	

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67619

simple name	knife, MK1	period	Middle Kingdom, 12th Dynasty	size	19.8x4.12x0.76
functional name		colour	mid brown	shape	
excavation no	15.10.90	house/tomb	4770	context	
date evidence					
references	Petrie 1891, 12, 51-52, pl. 7 no 8				
description	Reasonably straight edge.				

max length	19.8	max width	41.2	retouch	
width(quarter)	35.4	thickness(quarter)	8.2	termination	
width(half)	39.5	thickness(half)	8.4	blade part	
width(3 quarter)	36.5	thickness(3 quarter)	6.5	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67620

simple name	knife, MK2	period	Middle Kingdom, 12th Dynasty	size	13.82x2.58x0.49
functional name		colour	mid brown	shape	
excavation no	15.10.90	house/tomb	4771	context	
date evidence					
references	Petrie 1891, 12, 51-52, pl. 7 no 11				
description	Sinious edge on profile.				

max length	138	max width	25.5	retouch	
width(quarter)	23	thickness(quarter)	6	termination	
width(half)	25.5	thickness(half)	5.2	blade part	
width(3 quarter)	24	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67621

simple name	blade, pointed	period	Middle Kingdom, 12th Dynasty	size	11.08x1.41x0.32
functional name		colour	mid brown	shape	narrow
excavation no	15.10.90	house/tomb	4772	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Traces of mastic about half way along blade. Curved edge on profile. Prismatic. Facet at bulbar end possibly platform preperation rather than retouch.				

max length	112	max width	14.5	retouch	dorsal
width(quarter)	35.2	thickness(quarter)	2.5	termination	broken
width(half)	13	thickness(half)	2.6	blade part	complete
width(3 quarter)	10.7	thickness(3 quarter)	2.6	segmented/truncated	segmented
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67735

simple name	axe	period	Middle Kingdom, 12th Dynasty	size	17x7.1x1.25cm
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Remains of cortex. Reasonably straight edge on profile.				

max length	17.7	max width	68.8	retouch	
width(quarter)	64.5	thickness(quarter)	14.1	termination	
width(half)	55.8	thickness(half)	12.6	blade part	
width(3 quarter)	43.1	thickness(3 quarter)	10.8	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67594

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	
functional name		colour	very dark brown, al	shape	
excavation no	30.12.90	house/tomb	4858	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Prismatic. One end broken, other worked. Irregular denticulation.				

max length	46.9	max width	15.8	retouch	
width(quarter)	13.8	thickness(quarter)	4.8	termination	
width(half)	14.6	thickness(half)	4.8	blade part	medial
width(3 quarter)	15.4	thickness(3 quarter)	4.2	segmented/truncated	segmented
wear					

PLACE	Bet Khallaf ?	MUSEUM	BM	MUSEUM NO.	BM67629

simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty?	size	
functional name		colour	pale brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang 1903, pl XV. Since these were found near rather than in the tomb they may be of a different date.				
description	Battered.				

max length	50.4	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	20.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallaf	MUSEUM	BM	MUSEUM NO.	BM67626

simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty?	size	8.64x6.72x3cm
functional name		colour	mid brown	shape	
excavation no	1901 11-12 1	house/tomb		context	
date evidence					

references: Garstang 1903, pl. XV. Finds from the vicinity of the 'tomb' of Neter-Khet (Djoser). Since these were found near rather than in the tomb they may be of a different date. Spencer 1980, p100 (751) and plate 79.

description: Slight wear, smoothing of edges.

max length	88	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	39.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear:

PLACE	Bet Khallaf	MUSEUM	BM	MUSEUM NO.	BM67628

simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty?	size	7.45x5.65x2.5c
functional name		colour	yellow brown	shape	
excavation no	1901 11-12 3	house/tomb		context	
date evidence					

references: Garstang, J., 1903, pl. XV. Finds from the vicinity of the 'tomb' of Neter-Khet (Djoser). Possibly 3rd column, 3rd row down. Since these were found near rather than in the tomb they may be of a different date. Spencer 1980 p101 9753) Plate 79.

description: Worn.

max length	75.7	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	24.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear:

PLACE	Bet Khallaf	MUSEUM	BM	MUSEUM NO.	BM67627

simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty?	size	8.98x5.95x2.92c
functional name		colour	mid brown	shape	
excavation no	1901 11-12 2	house/tomb		context	
date evidence					

references: Garstang, J., 1903, pl. XV. Finds from the vicinity of the 'tomb' of Neter-Khet (Djoser) p3,4, 19. Since these were found near rather than in the tomb they may be of a different date. Spencer 1980 p101 (752) Plate 79.

description: Edges smooth as though worn. Remains of cortex. Worn.

max length	99.2	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	39.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear:

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67728

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty		size	7.5x1.38x0.55c
functional name	sickle		colour	mid brown	shape	narrow
excavation no			house/tomb		context	

date evidence	
references	Petrie 1891, 12, 51-52
description	Gloss. Broken at one end, retouch at other. Prismatic cross-section.

max length	71.3	max width	12.8	retouch	medial, broken at both ends		
width(quarter)	10.4	thickness(quarter)	3.9			termination	broken
width(half)	13.6	thickness(half)	5.8			blade part	
width(3 quarter)	12.5	thickness(3 quarter)	4.5			segmented/truncated	seg + trunc

wear	Gloss along serrated facet, dorsal side and 1 on other

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67734

simple name	knife, fragment	period	Middle Kingdom		size	9.2x3.48x0.9cm	
functional name			colour	mid brown	shape		
excavation no			house/tomb		context		

date evidence	
references	Petrie 1891, 12, 51-52
description	Bifacial retouch, broken at both ends. Semi abrupt retouch along both edges. Seitenbezogenheit

max length	94.8	max width	33.1	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	8.6			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67732

simple name	bifacial point	period	Middle Kingdom		size	8.51x3.98x0.74c	
functional name			colour	light-mid brown	shape		
excavation no			house/tomb		context		

date evidence	
references	Petrie 1891, 12, 51-52
description	Finely made spear point. Remains of cortex on tip. Bifacial. This could either be a spear or pike tip or alternatively a knife tip.

max length	83.8	max width	39	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.6			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67631

simple name	bifacial tool	period	Middle Kingdom	size	10.4cm long
functional name		colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4877	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Curved edge on profile. Triangular cross-section.				

max length	11.7	max width	13.1	retouch	
width(quarter)	9.9	thickness(quarter)	10	termination	
width(half)	12.6	thickness(half)	12.2	blade part	
width(3 quarter)	12.1	thickness(3 quarter)	9.1	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67615

simple name	triangular blade	period	Middle Kingdom	size	9.38x6.18x1.62c
functional name		colour	mid brown/grey	shape	
excavation no	30.12.90	house/tomb	4879	context	
date evidence					
references	Petrie 1891 "Illahun, Kahun and Gurob" p 12, 51-52				
description	Thick triangular blade. Abrupt inverse retouch (from ventral side). Cortex remaining.				

max length	85.1	max width	58	retouch	dorsal
width(quarter)	53	thickness(quarter)	15.5	termination	worked
width(half)	44.8	thickness(half)	13.6	blade part	proximal
width(3 quarter)	32.6	thickness(3 quarter)	9.7	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67614

simple name	blade, retouched, lateral	period	Middle Kingdom	size	13.25x4.9x1.59c
functional name		colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4878	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Large, thick blade. Scalar retouch (from ventral side) along lateral edge. Broken at proximal end. Triangular cross-section				

max length	129	max width	42	retouch	retouch at distal end
width(quarter)	42	thickness(quarter)	14.9	termination	
width(half)	40.2	thickness(half)	13.9	blade part	
width(3 quarter)	37.8	thickness(3 quarter)	13	segmented/truncated	seg + trunc
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67613

simple name	blade, crested	period	Middle Kingdom	size	3.32x0.72x0.79c
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1891, 12, 51-52				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67730

simple name	end blade, sickle	period	Middle Kingdom	size	6.7x1.38x0.3cm
functional name	sickle, end	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Gloss. retouch at proximal end.				

max length	66.9	max width	13.5	retouch	
width(quarter)	12.5	thickness(quarter)	2.8	termination	
width(half)	12.2	thickness(half)	2.8	blade part	distal
width(3 quarter)	11.8	thickness(3 quarter)	2.7	segmented/truncated	
wear	Gloss				

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67592

simple name	end blade, sickle	period	Middle Kingdom	size	3.5x0.98x0.36
functional name	sickle, end	colour	very dark brown	shape	narrow
excavation no	30.12.90	house/tomb	4856 WMPF 30.XII	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	No gloss. Proximal retouch. Neat, regular seration.				

max length	35.9	max width	9.8	retouch	dorsal
width(quarter)	9.6	thickness(quarter)	3.4	termination	
width(half)	7.9	thickness(half)	3	blade part	distal
width(3 quarter)	4.8	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67595

simple name	blade, retouched, lateral	period	Middle Kingdom	size	4.83x1.38x0.51
functional name		colour	dark brown	shape	narrow
excavation no	30.12.90	house/tomb	4859	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Broken at one end, other worked. No Gloss. Traingular cross section, irregular seration.				

max length	48.6	max width	14	retouch	
width(quarter)	10	thickness(quarter)	4.4	termination	
width(half)	12.5	thickness(half)	4.4	blade part	medial
width(3 quarter)	13.6	thickness(3 quarter)	4.9	segmented/truncated	seg + trunc
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67597

simple name	blade, retouched, lateral	period	Middle Kingdom	size	5.16x1x2.6cm
functional name	sickle	colour	very dark brown	shape	narrow
excavation no	30.12.90	house/tomb	4861	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Broken at proximal end, abrupt retouch at distal. Gloss. Irregular seration.				

max length	52	max width	10.1	retouch	
width(quarter)	8.6	thickness(quarter)	2.1	termination	
width(half)	8.5	thickness(half)	2.6	blade part	medial
width(3 quarter)	8.3	thickness(3 quarter)	3	segmented/truncated	seg + trunc
wear	Gloss				

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67596

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name		colour	mid brown	shape	narrow
excavation no	30.12.90	house/tomb	4860	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	No gloss, abrupt retouch both ends. Irregular serration, triangular cross-section.				

max length	73.2	max width	12.9	retouch	
width(quarter)	12	thickness(quarter)	5.4	termination	
width(half)	12.8	thickness(half)	5.8	blade part	
width(3 quarter)	11.1	thickness(3 quarter)	6	segmented/truncated	truncated
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67598

simple name	blade, retouched, lateral	period	Middle Kingdom	size	6.48x0.76x0.49c
functional name	sickle, end	colour	mid brown (striated	shape	narrow
excavation no	30.12.90	house/tomb	4862	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Gloss. Broken proximal end. Irregular serations, triangular cross section.				

max length	64.7	max width	10.7	retouch	both
width(quarter)	10.3	thickness(quarter)	4.9	termination	
width(half)	10.8	thickness(half)	5	blade part	distal
width(3 quarter)	10.3	thickness(3 quarter)	3.5	segmented/truncated	segmented
wear	Gloss on ventral side along serrated edge, 1 in				

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67600

simple name	blade, retouched	period	Middle Kingdom	size	4.8x3.2x0.4cm
functional name		colour	mid brown	shape	narrow
excavation no	30.12.90	house/tomb	4864	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Broken distal end end. Prismatic.				

max length	47.5	max width	13.4	retouch	ventral
width(quarter)	13.4	thickness(quarter)	14.6	termination	
width(half)	13.2	thickness(half)	13.5	blade part	
width(3 quarter)	13.2	thickness(3 quarter)	12.5	segmented/truncated	segmented
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67599

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name		colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4853	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Broken at distal end, abrupt retouch at proximal. Prismatic. Irregular denticulation.				

max length	53	max width	12.4	retouch	
width(quarter)	12.5	thickness(quarter)	3.3	termination	broken
width(half)	11.5	thickness(half)	2.7	blade part	medial
width(3 quarter)	19.8	thickness(3 quarter)	2.5	segmented/truncated	seg + trunc
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67606

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name		colour	mid brown/grey	shape	
excavation no	30.12.90	house/tomb	4870	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Prismatic, irregular serrations.				

max length	55.7	max width	15.6	retouch	
width(quarter)	14.2	thickness(quarter)	3.7	termination	
width(half)	14.8	thickness(half)	4.2	blade part	medial
width(3 quarter)	15.1	thickness(3 quarter)	4.2	segmented/truncated	segmented
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67608

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle, end	colour	light-mid grey	shape	
excavation no	30.12.90	house/tomb	4872	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Triangular cross section, irregular serations pointed distal end and broken proximal.				

max length	66.1	max width	11.2	retouch	
width(quarter)	11	thickness(quarter)	4.3	termination	
width(half)	11.9	thickness(half)	3.8	blade part	medial
width(3 quarter)	11.3	thickness(3 quarter)	3.1	segmented/truncated	segmented
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67609

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle, end	colour	light grey/brown	shape	
excavation no	30.12.90?	house/tomb	4873?	context	
date evidence					
references	Petrie 1891, 12, 51-52				
description	Triangular, irregular serrations.				

max length	44.4	max width	18.8	retouch	
width(quarter)	18.8	thickness(quarter)	6.9	termination	
width(half)	16.4	thickness(half)	6.4	blade part	proximal
width(3 quarter)	15.5	thickness(3 quarter)	5.9	segmented/truncated	segmented
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67610

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle	colour	mid brown	shape	
excavation no	30.12.90	house/tomb	4874	context	

date evidence

references: Petrie 1891, 12, 51-52

description: Broken proximal and pointed distal. Trianglular cross-section. Very light, if any, retouch on both lengths

max length	46.7	max width	10.4	retouch	
width(quarter)	10.4	thickness(quarter)	2.8	termination	
width(half)	10.3	thickness(half)	3.6	blade part	medial
width(3 quarter)	9.3	thickness(3 quarter)	2.4	segmented/truncated	segmented

wear

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67612

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name		colour	dark reddish brown	shape	
excavation no	30.12.90	house/tomb	4876?	context	

date evidence

references: Petrie 1891, 12, 51-52

description: Prismatic. Irregular retouch distal end and long edges. Wear on distal.

max length	65.8	max width	16.2	retouch	dorsal
width(quarter)	15	thickness(quarter)	5.1	termination	
width(half)	16.2	thickness(half)	4.9	blade part	proximal, abrupt
width(3 quarter)	15.1	thickness(3 quarter)	4.4	segmented/truncated	truncated

wear

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67611

simple name	blade, retouched, lateral	period	Middle Kingdom	size	
functional name	sickle, end	colour	dark reddish brown	shape	
excavation no	30.12.90	house/tomb	4875	context	

date evidence

references: Petrie 1891, 12, 51-52

description: Backed on side.

max length	26.9	max width	10.9	retouch	
width(quarter)	10.9	thickness(quarter)	4.1	termination	
width(half)	9.5	thickness(half)	3.4	blade part	medial, broken o
width(3 quarter)	6.5	thickness(3 quarter)	3.4	segmented/truncated	segmented

wear

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67728

simple name	blade, sickle	period	Middle Kingdom	size	
functional name	sickle	colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1891, 12, 51-52				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM67725

simple name	blade	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1891, 12, 51-52				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	BM	MUSEUM NO.	BM6703

simple name	blade	period	Middle Kingdom	size	
functional name	sickle	colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1891, 12, 51-52				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Tell el-Farain	MUSEUM	BM	MUSEUM NO.	BM74743

simple name	blade, retouched, lateral	period	Late Period	size	
functional name		colour	pale yellow/brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	75.5	max width	39	retouch	dorsal-serrations along one edge		
width(quarter)	39.5	thickness(quarter)	14.5			termination	broken
width(half)	36.1	thickness(half)	12.5			blade part	proximal
width(3 quarter)	35.5	thickness(3 quarter)	10.3			segmented/truncated	segmented

wear	

PLACE	Tell el-Farain	MUSEUM	BM	MUSEUM NO.	BM74744

simple name	blade, unretouched	period	Late Period	size	2.49x1,39x0.42
functional name	sickle	colour	mid grey	shape	
excavation no	1994 11-5 23	house/tomb		context	

date evidence	
references	
description	Broken both ends, triangular.

max length	24.4	max width	13.4	retouch			
width(quarter)	12.6	thickness(quarter)	12.8			termination	broken
width(half)	13	thickness(half)	39			blade part	medial
width(3 quarter)	13.5	thickness(3 quarter)	38			segmented/truncated	segmented

wear	

PLACE	Meidum	MUSEUM	BM	MUSEUM NO.	BM68780/1

simple name	blade, retouched/Interme	period	Old Kingdom, 4th Dynasty	size	7.69x1.8cm
functional name	broad/intermediate	colour		shape	broad
excavation no	14.12.92	house/tomb	101	context	

date evidence	
references	
description	Kennard Collection. 1 of 2 blades from the same core. Both retouched at proximal ends.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	BM	MUSEUM NO.	BM68780/2

simple name	razor, square	period	Old Kingdom, 4th Dynasty	size	2.75x6.79
functional name		colour		shape	broad
excavation no	14.12.92	house/tomb	101	context	

date evidence	
references	
description	Kennard Collection. 1 of 2 blades from the same core. Both retouched at proximal ends. This one is a razor with square ends.

max length	6.9	max width	2.75	retouch			
width(quarter)	2.75	thickness(quarter)				termination	
width(half)	2.75	thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Fayum	MUSEUM	BM	MUSEUM NO.	BM73846

simple name	crescentic drill bit	period	Old Kingdom, 4th Dynasty	size	6.53x4x1.7cm
functional name		colour	matt mid brown	shape	
excavation no	1990 12-10 34	house/tomb		context	

date evidence	
references	
description	

max length	64.8	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	BM	MUSEUM NO.	BM68778/1

simple name	blade, retouch, distal	period	Old Kingdom, 4th Dynasty	size	9.8x3cm
functional name	broad/intermediate	colour	mid pinkish brown	shape	broad
excavation no	14.12.1892	house/tomb	6071	context	

date evidence	
references	
description	Kennard Collection. 1 of 3 blades from the same core. Traces of cortex.

max length	98.2	max width	30	retouch	dorsal		
width(quarter)	20.5	thickness(quarter)				termination	abrupt retouch a
width(half)	23.3	thickness(half)				blade part	
width(3 quarter)	29	thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Meidum	MUSEUM	BM	MUSEUM NO.	BM68778/2

simple name	blade, retouch, distal	period	Old Kingdom, 4th Dynasty	size	9.34x2.88cm
functional name	broad/intermediate	colour	mid pinkish brown	shape	broad
excavation no	14.12.1892	house/tomb	6071	context	

date evidence

references

description: Kennard Collection. 1 of 3 blades from the same core. Traces of cortex.

max length		max width		retouch	dorsal
width(quarter)		thickness(quarter)		termination	abrupt retouch a
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Meidum	MUSEUM	BM	MUSEUM NO.	BM68778/3

simple name	blade, retouch, distal	period	Old Kingdom, 4th Dynasty	size	8.15x2.67cm
functional name	broad/intermediate	colour	mid pinkish brown	shape	broad
excavation no	14.12.1892	house/tomb	6071	context	

date evidence

references

description: Kennard Collection. 1 of 3 blades from the same core. Traces of cortex.

max length	8.15	max width	26.7	retouch	dorsal
width(quarter)	20.5	thickness(quarter)		termination	abrupt retouch a
width(half)	31.3	thickness(half)		blade part	
width(3 quarter)	24.2	thickness(3 quarter)		segmented/truncated	

wear

PLACE	Meidum	MUSEUM	BM	MUSEUM NO.	BM68779/1

simple name	blade, retouch, distal	period	Old Kingdom, 4th Dynasty	size	8.71x3.23cm
functional name	broad/intermediate	colour	mid brown	shape	broad
excavation no	14.12.1892	house/tomb	5072/103	context	

date evidence

references

description: Kennard Collection. 1 of 2 blades from the same core. Traces of cortex. '103' in pencil. Prismatic cross-section.

max length	87	max width	31.3	retouch	
width(quarter)	24.9	thickness(quarter)	7.4	termination	abrupt retouch a
width(half)	29.8	thickness(half)	9.4	blade part	complete
width(3 quarter)	29.9	thickness(3 quarter)	8.3	segmented/truncated	

wear

PLACE	Meidum	MUSEUM	BM	MUSEUM NO.	BM68779/2

simple name	blade, retouch, distal	period	Old Kingdom, 4th Dynasty	size	7.95x1.76cm
functional name	broad/intermediate	colour	mid brown	shape	broad
excavation no	14.12.1892	house/tomb	5072/103	context	
date evidence					
references					
description	Kennard Collection. 1 of 2 blades from the same core. Traces of cortex. '103' in pencil				

max length	79.5	max width		retouch	
width(quarter)	14.2	thickness(quarter)		termination	abrupt retouch a
width(half)	13.8	thickness(half)		blade part	
width(3 quarter)	16.3	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Fayum	MUSEUM	BM	MUSEUM NO.	BM73858

simple name	bifacial tool	period	Old Kingdom	size	7.13x2.5x0.6cm
functional name		colour	mid-dark orange-br	shape	
excavation no	1990 12-10 46	house/tomb		context	
date evidence					
references					
description	Serrated, bifacial.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Fayum	MUSEUM	BM	MUSEUM NO.	BM73860

simple name	bifacial point	period	Old Kingdom	size	6.92x3.5x0.78c
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Pointed bifacial tool, broken.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Fayum	MUSEUM	BM	MUSEUM NO.	BM73840

simple name	bifacial point	period	Old Kingdom	size	8.68x3.62x0.88c
functional name		colour		shape	
excavation no	1990 12-10 28	house/tomb		context	

date evidence

references

description: Pointed bifacial tool, broken, N of Lake.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Fayum	MUSEUM	BM	MUSEUM NO.	BM68959

simple name	knife, MK6	period	Old Kingdom	size	32.5x7.65x1.05c
functional name		colour	mid brown	shape	
excavation no	6.11.91	house/tomb	5395	context	

date evidence

references

description: Knife with handle labelled 'AWF 6th Nov 91' and 'WMRP'.

max length		max width	75.9	retouch	
width(quarter)	56	thickness(quarter)	8.8	termination	
width(half)	75	thickness(half)	9.6	blade part	
width(3 quarter)	69.8	thickness(3 quarter)	8.6	segmented/truncated	

wear

PLACE	Thebes, VK	MUSEUM	Cairo	MUSEUM NO.	32p

simple name	knife, amuletic	period	New Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references: Murray and Nuttall 1963, 'Two knives of slate-coloured hard cherty limestone'

description: Tomb of Tutankhamun.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Thebes, VK	MUSEUM	Cairo	MUSEUM NO.	32q

simple name	knife, amuletic	period	New Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Murray and Nuttall 1963, 032q "Five knives of hard crystalline limestone'				
description	Tomb of Tutankhamun.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Thebes, VK	MUSEUM	Cairo	MUSEUM NO.	620,62

simple name	knife, amuletic	period	New Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Murray and Nuttall 1963, 'Flint knives (? amuletic)'				
description	Tomb of Tutankhamun.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Thebes, VK	MUSEUM	Cairo	MUSEUM NO.	620,63

simple name	knife, amuletic	period	New Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Murray and Nuttall 1963, 'Flint knives (? amuletic)'				
description	Tomb of Tutankhamun.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	BM	MUSEUM NO.	BM68755

simple name	arrowhead	period	Early Dynastic	size	
functional name		colour	crystal	shape	
excavation no		house/tomb		context	
date evidence					
references	Spencer 1980, 100				
description	Djer.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	BM	MUSEUM NO.	BM67617

simple name	axe	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Berman 1999, 183 note 2; Davies 1987				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	BM	MUSEUM NO.	BM67618

simple name	axe	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Berman 1999, 183 note 2				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7565

simple name	knife, MK1	period	Middle Kingdom, Dynasty 12	size	180x48
functional name		colour	mid brown/light bro	shape	
excavation no		house/tomb	tomb	context	
date evidence					
references					
description	Complete knife, straight edge on profile, soft hammer, no signs of wear.				

max length	180	max width	48	retouch	
width(quarter)	34.2	thickness(quarter)	7.6	termination	
width(half)	45.9	thickness(half)	8.1	blade part	
width(3 quarter)	44	thickness(3 quarter)	7	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7566ii

simple name	knife fragment	period	Middle Kingdom, Dynasty 12	size	142x47
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Broken knife, averagealy deep scars, no evidence of sharpening, reasonable straight edge on profile.				

max length	142	max width	47	retouch	
width(quarter)	29.5	thickness(quarter)	7	termination	
width(half)	42.2	thickness(half)	6.6	blade part	
width(3 quarter)	47.1	thickness(3 quarter)	8.4	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7566iii

simple name	knife fragment, MK1 or	period	Middle Kingdom, Dynasty 12	size	192x41.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Broken knife labelled 'bought kahun'. For sharpening, held in left hand with point away from sharpener. Broken at handle end. Straight edge on profile. Seitenbezogenheit				

max length	192	max width	41.7	retouch	
width(quarter)	36.9	thickness(quarter)	8.8	termination	
width(half)	40.5	thickness(half)	7.8	blade part	
width(3 quarter)	40.2	thickness(3 quarter)	8.2	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC6568ii

simple name	knife, MK3	period	Middle Kingdom	size	137.3x38,5
functional name		colour	mid brown/dark bro	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Heavily sharpened knife, held in left hand with point away from sharpener, deep scars. Averagely sinious edge on profile. Positive Seitenbezogenheit

max length	137	max width	38	retouch			
width(quarter)	33.8	thickness(quarter)	7.6			termination	
width(half)	38.4	thickness(half)	8.5			blade part	
width(3 quarter)	31.5	thickness(3 quarter)	9			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7575ii

simple name	blade, retouched, lateral	period	Middle Kingdom	size	55.8x25.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Blade truncated both ends, lateral serrations, pronounced bulb of percussion, unidirectional flake.

max length	55.8	max width	29.6	retouch	ventral		
width(quarter)	27.2	thickness(quarter)	5.4			termination	na
width(half)	25.1	thickness(half)	4.6			blade part	medial
width(3 quarter)	22.1	thickness(3 quarter)	4.2			segmented/truncated	truncated

wear	na

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7575iv

simple name	blade, retouched, lateral	period	Middle Kingdom	size	53.5x38
functional name		colour	mid-light brown, pat	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	Blade truncated proximal and distal, unclear direction of flake, one edge serrated.

max length	53.5	max width	38.6	retouch	dorsal		
width(quarter)	34	thickness(quarter)	6.8			termination	na
width(half)	38	thickness(half)	7.4			blade part	medial
width(3 quarter)	36.1	thickness(3 quarter)	8.1			segmented/truncated	truncated

wear	na

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7575v

simple name	blade, retouched, lateral	period	Middle Kingdom	size	59x20.5
functional name	sickle	colour	dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Mastic along non-serrated edge, dorsal edge worn or flaked? Truncation dorsal and distal.				

max length	59	max width	25.4	retouch	medial		
width(quarter)	20.5	thickness(quarter)	4.9			termination	na
width(half)	20.5	thickness(half)	5.5			blade part	
width(3 quarter)	20.6	thickness(3 quarter)	5.7			segmented/truncated	truncated
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527i(2)

simple name	flake, retouched	period		size	46.5x37.5x5.9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Flake with dorsal retouch. Are these unfinished knives suggesting on site manufacture or ad hoc tools?				

max length	46.5	max width	37.5	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.9			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527i(3)

simple name	knife fragment	period		size	84.3x32.7x7.1
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Seitenbezogenheit.				

max length	84.3	max width	32.7	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	7.1			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527i(4)

simple name	flake, retouched	period		size	59.3x33.7x7
functional name		colour	pale grey	shape	
excavation no		house/tomb		context	

date evidence

references

description: Flake with dorsal retouch. Are these unfinished knives suggesting on site manufacture or ad hoc tools?

max length	59.3	max width	33.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527i(5)

simple name	knife fragment	period		size	43.7x31.9x6.9
functional name		colour	grey/pink	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial blade marked K24.

max length	43.7	max width	31.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527i(6)

simple name	?knife handle	period		size	42.4x27.2x7.6
functional name		colour	strated orange/bro	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	42.4	max width	27.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527i(7)

simple name	?knife handle	period		size	36.3x21.1x7.3
functional name		colour	dark brown/grey	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	36.3	max width	21.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xi(1)

simple name	blade, unretouched	period		size	90.9x15.2x5.3
functional name		colour	black	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade marked K29.

max length	90.9	max width	15.2	retouch	
width(quarter)	14	thickness(quarter)	4	termination	
width(half)	15.2	thickness(half)	5.3	blade part	complete
width(3 quarter)	14.3	thickness(3 quarter)	5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xi(2)

simple name	blade, unretouched	period		size	83.8x11.4x3.7
functional name		colour	pale orange	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade marked K29.

max length	83.8	max width	11.4	retouch	
width(quarter)	11.4	thickness(quarter)	3.5	termination	
width(half)	10.8	thickness(half)	3.7	blade part	proximal
width(3 quarter)	8.4	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xi(3)

simple name	blade, retouched	period		size	52.4x14.7x4
functional name		colour	pinl brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade marked K29.

max length	52.4	max width	14.7	retouch	ventral both, dorsal left
width(quarter)	14.7	thickness(quarter)	3.7	termination	
width(half)	14.5	thickness(half)	4	blade part	proximal
width(3 quarter)	14	thickness(3 quarter)	4.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xi(4)

simple name	blade, retouched	period		size	78.1x20.5x4.1
functional name		colour	pink brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade marked K29.

max length	78.1	max width	20.8	retouch	dorsal, left
width(quarter)	20.8	thickness(quarter)	3.4	termination	
width(half)	18.5	thickness(half)	4.1	blade part	proximal
width(3 quarter)	14.2	thickness(3 quarter)	5.4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xi(5)

simple name	blade, retouched	period		size	28.5x12.9x3
functional name		colour	tranclusent orange/	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K29.

max length	28.5	max width	12.9	retouch	dorsal, both
width(quarter)	12.4	thickness(quarter)	3.5	termination	
width(half)	12.9	thickness(half)	3	blade part	medial
width(3 quarter)	12.5	thickness(3 quarter)	2.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xi(6)

simple name	blade, retouched	period		size	49.3x12.8x1.7
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K29.

max length	49.3	max width	12.8	retouch	ventral, right
width(quarter)	11.8	thickness(quarter)	1.6	termination	
width(half)	12.8	thickness(half)	1.8	blade part	medial
width(3 quarter)	10.4	thickness(3 quarter)	1.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xi(7)

simple name	blade, unretouched	period		size	54.2x14.2x4.1
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K29.

max length	54.2	max width	14.2	retouch	
width(quarter)	14	thickness(quarter)	5.2	termination	
width(half)	14.2	thickness(half)	4.1	blade part	
width(3 quarter)	11.9	thickness(3 quarter)	4.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527v(1)

simple name	blade, unretouched	period		size	33x14.9x2.3
functional name		colour	orange brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked SR.

max length	33	max width	13	retouch	
width(quarter)	12.8	thickness(quarter)	2.7	termination	
width(half)	14.9	thickness(half)	2.3	blade part	proximal
width(3 quarter)	13	thickness(3 quarter)	2.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527v(2)

simple name	blade, unretouched	period		size	30x12.5x3.3
functional name		colour	orange brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked SR.				

max length	30	max width	12.5	retouch	
width(quarter)	12.5	thickness(quarter)	3.5	termination	
width(half)	12.2	thickness(half)	3.3	blade part	medial
width(3 quarter)	12.2	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527v(3)

simple name	blade, unretouched	period		size	30.6x7.7x1.8
functional name		colour	grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked SR.				

max length	30.6	max width	7.7	retouch	
width(quarter)	5.1	thickness(quarter)	1.8	termination	
width(half)	7.7	thickness(half)	1.8	blade part	medial
width(3 quarter)	5.7	thickness(3 quarter)	1.7	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527v(4)

simple name	blade, unretouched	period		size	36.8x9.1x1.9
functional name		colour	grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked SR.				

max length	36.8	max width	9.4	retouch	
width(quarter)	9.4	thickness(quarter)	2.5	termination	
width(half)	9.1	thickness(half)	2.2	blade part	distal
width(3 quarter)	8.8	thickness(3 quarter)	1.9	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(1)

simple name	blade, unretouched	period		size	86.5x12.9x3.9
functional name		colour	pink	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked K28.				

max length	86.5	max width	12.9	retouch	
width(quarter)	12.9	thickness(quarter)	3.6	termination	
width(half)	12	thickness(half)	3.9	blade part	complete
width(3 quarter)	8.8	thickness(3 quarter)	4.8	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(2)

simple name	blade, unretouched	period		size	85.9x12.7x2.6
functional name		colour	brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked K28.				

max length	85.9	max width	12.7	retouch	
width(quarter)	12.7	thickness(quarter)	3	termination	
width(half)	10.4	thickness(half)	2.6	blade part	complete
width(3 quarter)	7.9	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(3)

simple name	blade, unretouched	period		size	86.2x12.7x5
functional name		colour	pink/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked K28.				

max length	86.2	max width	12.7	retouch	
width(quarter)	12.6	thickness(quarter)	4.1	termination	
width(half)	12.7	thickness(half)	5	blade part	complete
width(3 quarter)	12.7	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(4)
simple name	blade, unretouched	period		size	50.1x12.5x5.1
functional name		colour	brown grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked K28.				
max length	50.1	max width	14.2	retouch	
width(quarter)	12.2	thickness(quarter)	5.7	termination	
width(half)	12.5	thickness(half)	5.1	blade part	proximal
width(3 quarter)	14.2	thickness(3 quarter)	4.6	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(5)
simple name	blade, unretouched	period		size	46.7x15.5x6.8
functional name		colour	light grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked K28.				
max length	46.7	max width	15.5	retouch	
width(quarter)	14.1	thickness(quarter)	4.2	termination	
width(half)	15.5	thickness(half)	6.8	blade part	proximal
width(3 quarter)	14.6	thickness(3 quarter)	5.1	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(6)
simple name	blade, unretouched	period		size	45.9x19.3x4.2
functional name		colour	brown grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked K28.				
max length	45.9	max width	19.3	retouch	
width(quarter)	19.3	thickness(quarter)	4	termination	
width(half)	17.7	thickness(half)	4.2	blade part	proximal
width(3 quarter)	16.8	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(7)

simple name	blade, unretouched	period		size	46.5x10.5x3
functional name		colour	light grey	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Blade marked K28.

max length	46.5	max width	10.5	retouch	
width(quarter)	10.5	thickness(quarter)	3	termination	
width(half)	9.5	thickness(half)	3	blade part	proximal
width(3 quarter)	10.5	thickness(3 quarter)	2.2	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(8)

simple name	blade, unretouched	period		size	56.7x13.4x4.2
functional name		colour	cream	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Blade marked K28.

max length	56.7	max width	12.8	retouch	
width(quarter)	12.8	thickness(quarter)	4.7	termination	
width(half)	13.4	thickness(half)	4.2	blade part	distal
width(3 quarter)	11.4	thickness(3 quarter)	3.1	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(9)

simple name	blade, unretouched	period		size	67x12.6x2.1
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Blade marked K28.

max length	67	max width	12.6	retouch	
width(quarter)	12.6	thickness(quarter)	2.2	termination	
width(half)	10.7	thickness(half)	2.1	blade part	distal
width(3 quarter)	10.2	thickness(3 quarter)	3.2	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527x(10)

simple name	blade, unretouched	period		size	40x12.5x2.7
functional name		colour	black	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Blade marked K28.

max length	40	max width	12.5	retouch			
width(quarter)	12.5	thickness(quarter)	2.5			termination	
width(half)	11.7	thickness(half)	2.7			blade part	medial
width(3 quarter)	10	thickness(3 quarter)	2.7			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7575vi

simple name	blade, retouched, lateral	period	Middle Kingdom	size	53.6x20.9
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Thick blade truncated proximal and distal, gloss along serrated dorsal end, cortex on dorsal.

max length	53.6	max width	21.9	retouch	dorsal		
width(quarter)	20.9	thickness(quarter)	8.4			termination	hinged
width(half)	20.7	thickness(half)	10			blade part	medial
width(3 quarter)	19.2	thickness(3 quarter)	10			segmented/truncated	truncated

wear	dorsal sickle gloss

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7575Vii

simple name	blade, retouched, lateral	period	Middle Kingdom	size	41.4x24.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Serrated blade, broken both ends.

max length	41.4	max width	24.3	retouch			
width(quarter)	24	thickness(quarter)	5.3			termination	
width(half)	24.5	thickness(half)	5.2			blade part	
width(3 quarter)	23.5	thickness(3 quarter)	5			segmented/truncated	segmented

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7578

simple name	blade, retouched, lateral	period	Middle Kingdom	size	51x17.3
functional name	sickle	colour	mid grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Serrated blade with sickle gloss and mastic, broken both ends.				

max length	51	max width	18.4	retouch	dorsal
width(quarter)	14.2	thickness(quarter)	4.6	termination	
width(half)	17.3	thickness(half)	4.6	blade part	medial
width(3 quarter)	16.6	thickness(3 quarter)	3.6	segmented/truncated	segmented
wear	dorsal and ventral sickle gloss				

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569i

simple name	knife, fragment	period	Middle Kingdom	size	112.5x30.4
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife broken at both ends, sharpened both sides, averagely deep scars				

max length	113	max width	3.8	retouch	
width(quarter)	26.1	thickness(quarter)	6	termination	
width(half)	30.4	thickness(half)	7.1	blade part	
width(3 quarter)	33.3	thickness(3 quarter)	7.5	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569ii

simple name	knife fragment	period	Middle Kingdom	size	19.4x50
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife broken at both ends, little sharpening, straight edge on profile.				

max length	19.4	max width	53.5	retouch	
width(quarter)	32.5	thickness(quarter)	8.8	termination	
width(half)	44	thickness(half)	9.6	blade part	
width(3 quarter)	50	thickness(3 quarter)	10	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569iii

simple name	knife fragment	period	Middle Kingdom	size	70.2x28.2
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description: Reused knife. Broken at both ends. Retouch at wide broken end.

max length	70.2	max width	27.4	retouch	
width(quarter)	20	thickness(quarter)	5.1	termination	
width(half)	24.8	thickness(half)	5.4	blade part	
width(3 quarter)	28.2	thickness(3 quarter)	5.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569iv

simple name	knife fragment	period	Middle Kingdom	size	36.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife with straight edge on profile.

max length	160	max width	36.6	retouch	
width(quarter)	21.7	thickness(quarter)	6.5	termination	
width(half)	27.1	thickness(half)	7.6	blade part	
width(3 quarter)	35	thickness(3 quarter)	7.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569v

simple name	knife fragment	period	Middle Kingdom	size	51x27.8
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife fragment.

max length	51	max width	31.7	retouch	
width(quarter)	19.4	thickness(quarter)	7.3	termination	
width(half)	25.4	thickness(half)	8	blade part	
width(3 quarter)	27.8	thickness(3 quarter)	9.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569vi

simple name	knife fragment	period	Middle Kingdom	size	68.8x28.7
functional name		colour	dark brown/grey	shape	
excavation no		house/tomb		context	

date evidence

references

description: Roughly made knife fragment broken and retouched one side, sinious edge on profile Seitenbezogenheit.

max length	68.8	max width	29.5	retouch	
width(quarter)	26.2	thickness(quarter)	8	termination	
width(half)	28.7	thickness(half)	6.6	blade part	
width(3 quarter)	28.3	thickness(3 quarter)	7.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569vii

simple name	knife fragment	period	Middle Kingdom	size	60.2x25.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife fragment, sharpening by right handed person as expected, straight edge on profile.Seitenbezogenheit.

max length	60.2	max width	26.9	retouch	
width(quarter)	15.5	thickness(quarter)	3.3	termination	
width(half)	19.9	thickness(half)	4.6	blade part	
width(3 quarter)	25.1	thickness(3 quarter)	5.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569viii

simple name	knife fragment	period	Middle Kingdom	size	84.9x45.9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife fragment broken at both ends, straight edge on profile, no sign of sharpening.

max length	84.9	max width	47.5	retouch	
width(quarter)	31.8	thickness(quarter)	7.9	termination	
width(half)	39.6	thickness(half)	8.2	blade part	
width(3 quarter)	45.9	thickness(3 quarter)	6.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569ix

simple name	knife fragment	period	Middle Kingdom	size	80x34.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife fragment, sinious edge on profile, no sign of sharpening.

max length	80	max width	36.5	retouch	
width(quarter)	20.2	thickness(quarter)	6.8	termination	
width(half)	31	thickness(half)	9	blade part	
width(3 quarter)	34.5	thickness(3 quarter)	7.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569x

simple name	knife fragment	period	Middle Kingdom	size	71.1x38.2
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Averagely sinious edge on profile, no sign of sharpening.

max length	71.1	max width	38.6	retouch	
width(quarter)	32	thickness(quarter)	7.6	termination	
width(half)	35.8	thickness(half)	7.1	blade part	
width(3 quarter)	38.2	thickness(3 quarter)	6.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xi

simple name	knife fragment	period	Middle Kingdom	size	84.8x25.6
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Sharpening as expected, straight edge on profile Seitenbezogenheit.

max length	84.8	max width	28.5	retouch	
width(quarter)	16.5	thickness(quarter)	5.1	termination	
width(half)	22.2	thickness(half)	6.5	blade part	
width(3 quarter)	25.6	thickness(3 quarter)	6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xii

simple name	knife fragment	period	Middle Kingdom	size	65.6x35.9
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Fine retouch, shallow scales,straight edge on profile.

max length	65.6	max width	38.3	retouch			
width(quarter)	23.5	thickness(quarter)	4.8			termination	
width(half)	29.2	thickness(half)	5.2			blade part	
width(3 quarter)	35.9	thickness(3 quarter)	5.6			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xiii

simple name	knife fragment	period	Middle Kingdom	size	85.3x31.4
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Heavily sharpened top and bottom. Top as one might expect but more unclear for bottom. Sinious and blunt edge on profile. Deep scars Seitenbezogenheit

max length	85.3	max width	33.6	retouch			
width(quarter)	24.5	thickness(quarter)	6.1			termination	
width(half)	27	thickness(half)	6.7			blade part	
width(3 quarter)	31.4	thickness(3 quarter)	7.2			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xiv

simple name	knife fragment	period	Middle Kingdom			size	62.2x26.9
functional name			colour			shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Heavy sharpening as expected for a right handed person Seitenbezogenheit.

max length	62.2	max width	27.7	retouch			
width(quarter)	15.4	thickness(quarter)	4.8			termination	
width(half)	23.2	thickness(half)	6.9			blade part	
width(3 quarter)	26.9	thickness(3 quarter)	6.3			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xv

simple name	knife fragment	period	Middle Kingdom	size	71.7x53.5
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Appears to be sharpened opposite way to hos one might expect Seitenbezogenheit.

max length	71.7	max width	55.7	retouch	
width(quarter)	35	thickness(quarter)	4.7	termination	
width(half)	42.2	thickness(half)	5.6	blade part	
width(3 quarter)	53.5	thickness(3 quarter)	5.8	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xvi

simple name	knife fragment	period	Middle Kingdom	size	73.8x47.6
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	No signs of sharpening, light scars.

max length	73.8	max width	47.9	retouch	
width(quarter)	38.1	thickness(quarter)	7.9	termination	
width(half)	43.8	thickness(half)	7	blade part	
width(3 quarter)	47.6	thickness(3 quarter)	6.5	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xvii

simple name	knife fragment	period	Middle Kingdom	size	68x31.8
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	No signs of sharpening, average scar depth.

max length	68	max width	34.2	retouch	
width(quarter)	17.5	thickness(quarter)	5.5	termination	
width(half)	24.2	thickness(half)	4.4	blade part	
width(3 quarter)	31.8	thickness(3 quarter)	5.2	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xviii

simple name	knife fragment	period	Middle Kingdom	size	69.1x35
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	No signs of sharpening.				

max length	69.1	max width	37.2	retouch	
width(quarter)	35	thickness(quarter)	6.6	termination	
width(half)	32.9	thickness(half)	5.7	blade part	
width(3 quarter)	28.8	thickness(3 quarter)	5.2	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xix

simple name	knife fragment	period	Middle Kingdom	size	61.1x25.2
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sinious edge on profile sharpening top and bottom as for right and left handed Seitenbezogenheit				

max length	61.1	max width	25.2	retouch	
width(quarter)	13.1	thickness(quarter)	5.4	termination	
width(half)	16.2	thickness(half)	5.6	blade part	
width(3 quarter)	18	thickness(3 quarter)	6.9	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xx

simple name	knife fragment	period	Middle Kingdom	size	67.3x36.5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpening as expected Seitenbezogenheit.				

max length	67.3	max width	36.6	retouch	
width(quarter)	27.4	thickness(quarter)	7.8	termination	
width(half)	33.9	thickness(half)	7	blade part	
width(3 quarter)	36.5	thickness(3 quarter)	6.8	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxi

simple name	knife fragment	period	Middle Kingdom	size	84.9x37.5
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpening as expected Seitenbezogenheit.

max length	84.9	max width	36.7	retouch			
width(quarter)	22.7	thickness(quarter)	7.1			termination	
width(half)	29.8	thickness(half)	7.4			blade part	
width(3 quarter)	37.5	thickness(3 quarter)	5.8			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxii

simple name	knife fragment	period	Middle Kingdom	size	73.6x37.9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpenened as expected on bottom, on top as for a left handed person. So, outside as viewed is smooth Seitenbezogenheit

max length	73.6	max width	39	retouch			
width(quarter)	25.3	thickness(quarter)	6.5			termination	
width(half)	32.5	thickness(half)	6.4			blade part	
width(3 quarter)	37.9	thickness(3 quarter)	6.2			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxiii

simple name	knife fragment	period	Middle Kingdom	size	80x30.8
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Heavily sharpened as expected Seitenbezogenheit.

max length	80	max width	30.8	retouch			
width(quarter)	18.5	thickness(quarter)	5.8			termination	
width(half)	25.1	thickness(half)	7.6			blade part	
width(3 quarter)	26.7	thickness(3 quarter)	7.2			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxiv

simple name	knife fragment	period	Middle Kingdom	size	53.4x32.4
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Heavily sharpened as expected Seitenbezogenheit.

max length	53.4	max width	32.4	retouch	
width(quarter)	20.2	thickness(quarter)	6.9	termination	
width(half)	24.2	thickness(half)	7.8	blade part	
width(3 quarter)	31	thickness(3 quarter)	7	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxv

simple name	knife fragment	period	Middle Kingdom	size	73.5x39.2
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Some sharpening as expected, mildly sinious edge on profile Seitenbezogenheit.

max length	73.5	max width	39.2	retouch	
width(quarter)	24.5	thickness(quarter)	7.8	termination	
width(half)	29.3	thickness(half)	9.9	blade part	
width(3 quarter)	35.8	thickness(3 quarter)	11.7	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxvi

simple name	knife fragment	period	Middle Kingdom	size	54.2x32.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Heavy sharpening as expected for a right handed person Seitenbezogenheit.

max length	54.2	max width	32.7	retouch	
width(quarter)	24	thickness(quarter)	6.3	termination	
width(half)	28.6	thickness(half)	6.4	blade part	
width(3 quarter)	32	thickness(3 quarter)	6	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxvii

simple name	knife fragment	period	Middle Kingdom	size	61x17.8
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife sharpening possibly opposite to expected depending on which end seen as point Seitenbezogenheit.				

max length	61	max width	17.8	retouch	
width(quarter)	14	thickness(quarter)	6.2	termination	
width(half)	17.4	thickness(half)	6	blade part	
width(3 quarter)	17.8	thickness(3 quarter)	5.8	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxviii

simple name	knife fragment	period	Middle Kingdom	size	67.7x31.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife sharpening as one would pect but top retouched as with point pointing in, as one would expect fpr right handed person. Smooth side out to onlooker. Seitenbezogenheit				

max length	67.7	max width	31.5	retouch	
width(quarter)	28.3	thickness(quarter)	7.1	termination	
width(half)	30.2	thickness(half)	8.4	blade part	
width(3 quarter)	31.1	thickness(3 quarter)	8.6	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxix

simple name	knife fragment	period	Middle Kingdom	size	51x26.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpening on top and bottom so that outside flat and smooth. Heavier sharpening on bottom Seitenbezogenheit				

max length	51	max width	26.4	retouch	
width(quarter)	18.5	thickness(quarter)	4.8	termination	
width(half)	24	thickness(half)	5.5	blade part	
width(3 quarter)	26.5	thickness(3 quarter)	5.9	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxx

simple name	knife fragment	period	Middle Kingdom	size	62.8x36.4
functional name		colour	dark brown/grey	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Deep scaring on one side, probably outside, as seen by observer, cortex on inside, away from observer Seitenbezogenheit

max length	62.8	max width	36.4	retouch	
width(quarter)	28.3	thickness(quarter)	8.2	termination	
width(half)	35.9	thickness(half)	9.8	blade part	
width(3 quarter)	35.7	thickness(3 quarter)	8	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxi

simple name	knife fragment	period	Middle Kingdom	size	95.2x33.5
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpened top and bottom with point away from sharpener, unless pointed end is the handle then left handed sharpening. Deep scars Seitenbezogenheit

max length	95.2	max width	33.5	retouch	
width(quarter)	21.7	thickness(quarter)	7.2	termination	
width(half)	27.7	thickness(half)	7.9	blade part	
width(3 quarter)	32.6	thickness(3 quarter)	8.4	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxii

simple name	knife fragment	period	Middle Kingdom	size	64.8x28.5
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	64.8	max width	28.9	retouch	
width(quarter)	16.5	thickness(quarter)	5.8	termination	
width(half)	22	thickness(half)	6	blade part	
width(3 quarter)	27.8	thickness(3 quarter)	4.6	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxiii

simple name	knife fragment	period	Middle Kingdom	size	77.7x25.5
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Cortex on inside, sharpening on base as one would expect, possible sharpening on top would be seen by observer Seitenbezogenheit

max length	77.7	max width	25.5	retouch	
width(quarter)	16	thickness(quarter)	7.4	termination	
width(half)	20.5	thickness(half)	6	blade part	
width(3 quarter)	25.5	thickness(3 quarter)	5.4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxiv

simple name	knife fragment	period	Middle Kingdom	size	111x52.9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: No sharpening, fine and shallow scars.

max length	111	max width	52.9	retouch	
width(quarter)	37.5	thickness(quarter)	5.8	termination	
width(half)	44.8	thickness(half)	8.2	blade part	
width(3 quarter)	50.5	thickness(3 quarter)	5.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxv

simple name	knife fragment	period	Middle Kingdom	size	81.2x44.9
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Large flake removed.

max length	81.2	max width	44.9	retouch	
width(quarter)	36.4	thickness(quarter)	5	termination	
width(half)	39.9	thickness(half)	5.8	blade part	
width(3 quarter)	44.2	thickness(3 quarter)	3.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxvi

simple name	knife fragment	period	Middle Kingdom	size	87.8x33.5
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sinious edge on profile,sharpened bottom with point away and probably sharpened top with point in so that flattened edge is to observer

max length	87.8	max width	33.5	retouch			
width(quarter)	26.3	thickness(quarter)	7.2			termination	
width(half)	31.4	thickness(half)	8.9			blade part	
width(3 quarter)	32.6	thickness(3 quarter)	8.3			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxvii

simple name	knife fragment	period	Middle Kingdom	size	76.4x31.2
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Flatter side toward observer.

max length	76.4	max width	31.2	retouch			
width(quarter)	17.3	thickness(quarter)	5.5			termination	
width(half)	23.5	thickness(half)	6.5			blade part	
width(3 quarter)	28.8	thickness(3 quarter)	5.8			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxviii

simple name	knife fragment	period	Middle Kingdom	size	117.5x42.6
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Deep scarring, sharpened with point toward sharpener top mainly sharpened with point away Seitenbezogenheit

max length	118	max width	42.6	retouch			
width(quarter)	30	thickness(quarter)	7.5			termination	
width(half)	33	thickness(half)	8			blade part	
width(3 quarter)	40	thickness(3 quarter)	6.8			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xxxix

simple name	knife fragment	period	Middle Kingdom	size	53x26.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Very fine, almost ripple flaked. Ripples particularly clear on inside top, no sharpening.

max length	53	max width	26.4	retouch			
width(quarter)	18	thickness(quarter)	3.8			termination	
width(half)	22.6	thickness(half)	4.1			blade part	
width(3 quarter)	25.8	thickness(3 quarter)	4.5			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xl

simple name	knife fragment	period	Middle Kingdom	size	103.2x47.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Difficult to tell which is top and which bottom

max length	103	max width	47.4	retouch			
width(quarter)	44.9	thickness(quarter)	8.9			termination	
width(half)	47.8	thickness(half)	9.4			blade part	
width(3 quarter)	43.9	thickness(3 quarter)	8.4			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xli

simple name	knife fragment	period	Middle Kingdom	size	82.4x40.3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Deep scarring, most retouch on bottom as one would expect but some other way, slightly flatter on observers side

max length	82.4	max width	40.3	retouch			
width(quarter)	28.6	thickness(quarter)	7.5			termination	
width(half)	34.3	thickness(half)	8.4			blade part	
width(3 quarter)	39.6	thickness(3 quarter)	7.2			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xlii

simple name	knife fragment	period	Middle Kingdom	size	68.6x49.3
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Seems to thick to be the point so assumed to be the handle.				

max length	68.6	max width	49.3	retouch	
width(quarter)	36	thickness(quarter)	11.3	termination	
width(half)	42.7	thickness(half)	11.4	blade part	
width(3 quarter)	49	thickness(3 quarter)	10.3	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xliii

simple name	knife fragment	period	Middle Kingdom	size	63.1x25.9
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Handle or point, no sign of sharpening.				

max length	63.1	max width	25.9	retouch	
width(quarter)	18.1	thickness(quarter)	5.6	termination	
width(half)	23.2	thickness(half)	6.3	blade part	
width(3 quarter)	26	thickness(3 quarter)	8.6	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xliv

simple name	knife fragment	period	Middle Kingdom	size	62x27.5
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Handle or point, no sign of sharpening.				

max length	62	max width	27.5	retouch	
width(quarter)	17.1	thickness(quarter)	5.3	termination	
width(half)	18.1	thickness(half)	6.7	blade part	
width(3 quarter)	25.4	thickness(3 quarter)	7.4	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xlv
simple name	knife fragment	period	Middle Kingdom	size	56.3x34.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Shallow scarring, finely made, no sharpening, pressure flaking, regular parallel flaking.				
max length	56.3	max width	34.4	retouch	
width(quarter)	27.4	thickness(quarter)	5.7	termination	
width(half)	29.5	thickness(half)	5	blade part	
width(3 quarter)	35.2	thickness(3 quarter)	5.1	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xlvi
simple name	knife fragment	period	Middle Kingdom	size	69.2x33.6
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Regular parallel flaking on observers side.				
max length	69.2	max width	33.6	retouch	
width(quarter)	23.7	thickness(quarter)	7.3	termination	
width(half)	28.1	thickness(half)	5.5	blade part	
width(3 quarter)	35	thickness(3 quarter)	6.3	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xlvii
simple name	knife fragment	period	Middle Kingdom	size	58x41.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	58	max width	41.4	retouch	
width(quarter)	31	thickness(quarter)	6.5	termination	
width(half)	37.6	thickness(half)	8.4	blade part	
width(3 quarter)	41.6	thickness(3 quarter)	9.5	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xlviii

simple name	knife fragment	period	Middle Kingdom	size	49x55
functional name		colour	mid brown/grey	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	49	max width	55	retouch	
width(quarter)	26	thickness(quarter)	5.3	termination	
width(half)	30	thickness(half)	5.8	blade part	
width(3 quarter)	34.8	thickness(3 quarter)	6.8	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569xlix

simple name	knife fragment	period	Middle Kingdom	size	47.6x30.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Edge retouch more pronounced on one side Seitenbezogenheit.

max length	47.6	max width	30.4	retouch	
width(quarter)	21	thickness(quarter)	5.3	termination	
width(half)	25	thickness(half)	5.4	blade part	
width(3 quarter)	26.2	thickness(3 quarter)	4.8	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569l

simple name	knife fragment	period	Middle Kingdom	size	53.5x24.6
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Handle?

max length	53.5	max width	24.6	retouch	
width(quarter)	16.4	thickness(quarter)	5.9	termination	
width(half)	20.5	thickness(half)	6.7	blade part	
width(3 quarter)	23.5	thickness(3 quarter)	6.3	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569li

simple name	knife fragment	period	Middle Kingdom	size	61x29.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: No sharpening.

max length	61	max width	29.1	retouch	
width(quarter)	18	thickness(quarter)	5.8	termination	
width(half)	23	thickness(half)	6.1	blade part	
width(3 quarter)	28.5	thickness(3 quarter)	6.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7569lii

simple name	knife fragment	period	Middle Kingdom	size	74.7x31.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Same front and back.

max length	74.7	max width	31.5	retouch	
width(quarter)	24.1	thickness(quarter)	8.5	termination	
width(half)	30.7	thickness(half)	8.3	blade part	
width(3 quarter)	29.1	thickness(3 quarter)	6.3	segmented/truncated	

wear

PLACE	Amarna	MUSEUM	Petrie	MUSEUM NO.	UC1539

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	84.5x15x4.8
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Proximal blade, facetted for platform preparation, traingular cross section, punctiform bulb. Come retouch at proximal end. Museum register reads 'Petrie 1891-2'

max length	84.8	max width	15	retouch	
width(quarter)	14.5	thickness(quarter)	3.9	termination	
width(half)	15	thickness(half)	4.8	blade part	proximal
width(3 quarter)	13.8	thickness(3 quarter)	4.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572i

simple name	blade, crested	period	Middle Kingdom	size	100x25x8.2
functional name		colour	mid grey	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	Crested blade, crested on right, bipolar.

max length	100	max width	25	retouch	
width(quarter)	20.3	thickness(quarter)	5.6	termination	
width(half)	20.2	thickness(half)	7.2	blade part	
width(3 quarter)	25	thickness(3 quarter)	8.2	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572ii

simple name	blade, retouched, lateral	period	Middle Kingdom	size	88.9x19.6x5.6
functional name		colour	orange brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	Blade with ventaral and dorsal lateral irregular retouch.

max length	88.9	max width	19.6	retouch	
width(quarter)	18.3	thickness(quarter)	4.7	termination	
width(half)	19.6	thickness(half)	4.9	blade part	
width(3 quarter)	16.4	thickness(3 quarter)	5.6	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572iii

simple name	blade, retouched, lateral	period	Middle Kingdom	size	59.8x20.8x8.8
functional name		colour	orange brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	Blade with steep dorsal retouch and shallow ventral retouch.

max length	59.8	max width	20.8	retouch	
width(quarter)	19.8	thickness(quarter)	8.5	termination	
width(half)	20.8	thickness(half)	10.4	blade part	
width(3 quarter)	18.5	thickness(3 quarter)	8.8	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572iv

simple name	blade, retouched, lateral	period	Middle Kingdom	size	43.2x25.7.7
functional name		colour	very dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	Distal blade with worn arris and hinge fracture.

max length	43.2	max width	25	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	7.7			blade part	distal
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572v

simple name	blade, retouched, lateral	period	Middle Kingdom	size	47.7x26.1x13.9
functional name		colour	very dark brown	shape	irregular
excavation no		house/tomb		context	

date evidence	
references	
description	Medial.

max length	47.7	max width	26.1	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	13.9			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572vi

simple name	blade, retouched, lateral	period	Middle Kingdom	size	70.3x26.2x8.9
functional name		colour	mid dark brown	shape	irregular
excavation no		house/tomb		context	

date evidence	
references	
description	Proximal blade with slight ventral lateral retouch.

max length	70.3	max width	26.2	retouch			
width(quarter)	24.6	thickness(quarter)	8.9			termination	
width(half)	25.7	thickness(half)	7.9			blade part	
width(3 quarter)	26.2	thickness(3 quarter)	7.8			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572vii

simple name	blade, retouched, lateral	period	Middle Kingdom	size	69.5x20.2x10
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description	Blade.				

max length	69.5	max width	20.2	retouch	
width(quarter)	20.2	thickness(quarter)	8.3	termination	
width(half)	18.9	thickness(half)	8.6	blade part	
width(3 quarter)	18.2	thickness(3 quarter)	10	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572viii

simple name	blade, retouched, lateral	period	Middle Kingdom	size	73.8x21.3x7.4
functional name		colour	mid-dark orange br	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description	Proximal blade with dorsal and ventral retouch.				

max length	73.8	max width	21.3	retouch	
width(quarter)	18.2	thickness(quarter)	5.6	termination	
width(half)	20.4	thickness(half)	5.9	blade part	
width(3 quarter)	21.3	thickness(3 quarter)	7.4	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572ix

simple name	blade, retouched, lateral	period	Middle Kingdom	size	85.7x25.2x6.2
functional name		colour	mid grey	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description	Dorsal retouch.				

max length	85.7	max width	25.2	retouch	
width(quarter)	25.2	thickness(quarter)	4.2	termination	
width(half)	24.2	thickness(half)	6.2	blade part	
width(3 quarter)	18	thickness(3 quarter)	5.7	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572x

simple name	blade, unretouched	period	Middle Kingdom	size	60x19.2x6.4
functional name		colour	orange brown	shape	irregular
excavation no		house/tomb		context	

date evidence

references

description: Proximal blade, cortical.

max length	60	max width	19.2	retouch	
width(quarter)	18	thickness(quarter)	5	termination	
width(half)	19.2	thickness(half)	6.4	blade part	proximal
width(3 quarter)	14	thickness(3 quarter)	5.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572xi

simple name	blade, retouched, lateral	period	Middle Kingdom	size	59.1x20.9x7.2
functional name		colour	orange brown	shape	irregular
excavation no		house/tomb		context	

date evidence

references

description: Complete blade, ventral retouch.

max length	59.1	max width	20.9	retouch	
width(quarter)	12.5	thickness(quarter)	5.5	termination	
width(half)	14.2	thickness(half)	6.2	blade part	complete
width(3 quarter)	20.9	thickness(3 quarter)	7.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572xii

simple name	blade, unretouched	period	Middle Kingdom	size	36.6x18.9x4
functional name		colour	dark orange brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Proximal blade.

max length	36.6	max width	18.9	retouch	
width(quarter)	13.9	thickness(quarter)	4	termination	
width(half)	16.9	thickness(half)	3.9	blade part	
width(3 quarter)	18.9	thickness(3 quarter)	4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572xiii

simple name	blade, unretouched	period	Middle Kingdom	size	71.5x24.7x11.7
functional name		colour	very dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	71.5	max width	24.7	retouch	
width(quarter)	21	thickness(quarter)	11.6	termination	
width(half)	24.7	thickness(half)	11.7	blade part	
width(3 quarter)	24	thickness(3 quarter)	9.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7572iv

simple name	blade, retouched, lateral	period	Middle Kingdom	size	38.8x6x21.2
functional name		colour	dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	38.8	max width	21.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC283771

simple name	blade	period	Middle Kingdom	size	62.9x25.6x9.9
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	

date evidence

references

description Proximal blade.

max length	62.9	max width	25.6	retouch	
width(quarter)	23.1	thickness(quarter)	9.3	termination	
width(half)	25.6	thickness(half)	9.9	blade part	proximal
width(3 quarter)	24.5	thickness(3 quarter)	8.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574i

simple name	flake, scraper, triangular	period	Middle Kingdom	size	91.3x68.7x21.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Triangular scraper made on a flake. Steep dorsal retouch. Roughly made.				

max length	91.3	max width	68.7	retouch	
width(quarter)	50	thickness(quarter)	16.3	termination	
width(half)	60.4	thickness(half)	17.4	blade part	
width(3 quarter)	68.7	thickness(3 quarter)	21.1	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574ii

simple name	knife, fragment	period	Middle Kingdom	size	63x46.9x7.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574iii

simple name	?	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574iv

simple name	flake, unretouched	period	Middle Kingdom	size	77.5x61.7x8.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Cortical flake.

max length	77.5	max width	61.7	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	8.1			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574v

simple name	blade, unretouched	period	Middle Kingdom	size	74.4x28.2x13.4
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Cortical blade.

max length	74.4	max width	28.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	13.4			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574vi

simple name	bifacial point	period	Middle Kingdom	size	44.5x7.7x37.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Bifacial point.

max length	44.5	max width	37.1	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	7.7			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574vii

simple name	flake, unretouched	period	Middle Kingdom	size	53.9x46.8x10.2
functional name		colour	orange brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Flake.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574viii

simple name	flake, unretouched	period	Middle Kingdom	size	
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Waste flake.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574ix

simple name	flake, knife sharpening	period	Middle Kingdom	size	48.9x49.5x4.3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Knife sharpening flake?

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574x

simple name	flake, waste	period	Middle Kingdom	size	
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Waste flake with cortex.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574xi

simple name	knife, fragment	period	Middle Kingdom	size	54.2x32.1x7.2
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Knife handle.

max length	54.2	max width	32.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574xii

simple name	flake	period	Middle Kingdom	size	5.9x58.4x6
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Waste flake.

max length	59	max width	58.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574xiii

simple name	knife?	period	Middle Kingdom	size	77.2x31.2x7.6
functional name		colour	orange brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Bifacial lump! Possibly an ill-formed knife.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574xiv

simple name	flake	period	Middle Kingdom	size	69x39.5x7.3
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description Cortical flake.

max length	69	max width	39.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574xv

simple name	flake	period	Middle Kingdom	size	39.4x20.9x5
functional name		colour	light grey	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7574xvi

simple name	flake, knife sharpening	period	Middle Kingdom	size	48.6x40.4x6.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife sharpening fragment?				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iv/1

simple name	knife, fragement	period	Middle Kingdom	size	100x15x4.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade, with fine dorsal retouch.				

max length	100	max width	15	retouch	
width(quarter)	14	thickness(quarter)	4.1	termination	
width(half)	15	thickness(half)	4.8	blade part	complete
width(3 quarter)	13	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iv/2

simple name	blade, retouched	period	Middle Kingdom	size	69.8x23.7x7.1
functional name		colour	orange brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade, worn on lateral edges, steep lateral retouch.				

max length	69.8	max width	23.7	retouch	
width(quarter)	19.6	thickness(quarter)	6.8	termination	
width(half)	23.4	thickness(half)	7.1	blade part	complete
width(3 quarter)	23.7	thickness(3 quarter)	6	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iv/3

simple name	blade, retouched, lateral	period	Middle Kingdom	size	55x15.3x18
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade with irregular steep ventral retouch.				

max length	55	max width	15.3	retouch			
width(quarter)	15.3	thickness(quarter)	2.9			termination	
width(half)	14.1	thickness(half)	2.6			blade part	distal
width(3 quarter)	11.2	thickness(3 quarter)	18			segmented/truncated	
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iv/4

simple name	blade, retouched, lateral	period	Middle Kingdom	size	43.9x17x3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade with trample or retouch.				

max length	43.4	max width	17	retouch			
width(quarter)	17	thickness(quarter)	2.6			termination	
width(half)	15.7	thickness(half)	2.5			blade part	proximal
width(3 quarter)	16.1	thickness(3 quarter)	3			segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Petrie	MUSEUM NO.	UC145

simple name	polished 'burnisher'	period	New Kingdom, 18th Dynasty	size	34.8x12.2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence	The dating must be based on the site. A very similar item in the Petrie Museum collection is catalogued as a chalcedony polisher for papyri, Dynasty 1 (UC15277)				
references	Petrie 1927, 64, pl. 56 no.35				
description	Burnisher', slightly facetted at point due to burnishing. Broken. Museum entry book reads 'Petrie 1891 Late XIII Dynasty'				

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE		MUSEUM	Petrie	MUSEUM NO.	

simple name		period		size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE		MUSEUM	Petrie	MUSEUM NO.	

simple name		period		size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7571iii

simple name	biface	period	Middle Kingdom	size	73.2x41x16.1
functional name		colour	orange brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Heavily patinated bifacially worked ?flake (appears as a flake as one side is more worked than the other. Marked "33H3"				

max length	73.2	max width	41	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	16.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7571iv

simple name	flake scraper	period	Middle Kingdom	size	63.5x34x7.8
functional name		colour	orange brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Marked 36H4" and "2"

max length	63.5	max width	34	retouch	
width(quarter)	33.6	thickness(quarter)	7	termination	
width(half)	30.1	thickness(half)	6.4	blade part	
width(3 quarter)	23.4	thickness(3 quarter)	7.8	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7571i

simple name	scraper	period	Middle Kingdom	size	48.7x52.6x13.4
functional name		colour	orange brown striat	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Scraper, very worn over the whole surface and glossy.

max length	48.7	max width	52.6	retouch	
width(quarter)	42	thickness(quarter)	13.4	termination	
width(half)	48.8	thickness(half)	11.1	blade part	
width(3 quarter)	53.1	thickness(3 quarter)	8.6	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7571ii

simple name	bifacial	period	Middle Kingdom	size	82.1x31.4x9.5
functional name		colour	orange brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Roughly made with hard hammer. Exhibs fractures, etc.

max length	82.2	max width	31.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)	9.5	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7571v

simple name	blade, retouched, lateral	period	Middle Kingdom	size	73.5x42x7.2
functional name		colour	orange brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	73.5	max width	42	retouch	dorsal		
width(quarter)	28.1	thickness(quarter)	4.6			termination	feathered
width(half)	34.3	thickness(half)	7.2			blade part	complete
width(3 quarter)	40.7	thickness(3 quarter)	3.8			segmented/truncated	
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7571vi

simple name	blade, retouched, lateral	period	Middle Kingdom	size	55.3x38x4.8
functional name		colour	dark brown-very da	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	55.3	max width	38	retouch	dorsal		
width(quarter)	34.5	thickness(quarter)	4.8			termination	broken
width(half)	38	thickness(half)	4.6			blade part	proximal
width(3 quarter)	37.5	thickness(3 quarter)	4.6			segmented/truncated	segmented
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567i

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.				

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567ii

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567iii

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567iv

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpened with blade pointing away from sharpener by right handed person. Likewise the top was retouched in the same manner. Seitenbezogenheit

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567v

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567vi

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567vii

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567viii

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567ix

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567x

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567xi

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567xii

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	sharpened with blade pointing away from sharpener by right handed person Seitenbezogenheit.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567xiii

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpened with blade pointing away from sharpener by right handed person. Very finely made. Seitenbezogenheit				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567xiv

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Finely made.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7567xv

simple name	knife	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Finely made.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxvii

simple name	blade	period		size	37.7x22x5.3
functional name		colour	dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	37.7	max width	22	retouch	steep dorsal right, shallow dorsal left
width(quarter)	21.3	thickness(quarter)	5.3	termination	
width(half)	17.2	thickness(half)	4.2	blade part	distal
width(3 quarter)	14.5	thickness(3 quarter)	4.2	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxviii

simple name	blade	period		size	31.4x13.6x4.1
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	31.4	max width	13.6	retouch	dorsal left
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.1	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxix

simple name	blade	period		size	42.7x11.5x2.2
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	42.7	max width	11.5	retouch	ventral?
width(quarter)	11.5	thickness(quarter)	2.2	termination	
width(half)	11.2	thickness(half)	2.1	blade part	distal
width(3 quarter)	8.7	thickness(3 quarter)	1.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxx

simple name	blade	period		size	31.6x12.5x2.6
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	31.6	max width	12.5	retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	2.6	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UV7573xxxii

simple name	blade, unretouched	period		size	67.2x13.4x2.9
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	67.2	max width	13.4	retouch	dorsal left		
width(quarter)	10.5	thickness(quarter)	2.9			termination	
width(half)	13.3	thickness(half)	2.2			blade part	proximal
width(3 quarter)	13.1	thickness(3 quarter)	2.7			segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxiii

simple name	blade, unretouched	period		size	51.7x15.7x3
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	51.7	max width	15.7	retouch			
width(quarter)	15.4	thickness(quarter)	2.5			termination	
width(half)	13.6	thickness(half)	3			blade part	proximal
width(3 quarter)	11.9	thickness(3 quarter)	3			segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxiv

simple name	blade, unretouched	period		size	52.7x14.8x3.5
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	52.7	max width	14.8	retouch			
width(quarter)	14.8	thickness(quarter)	3.1			termination	
width(half)	13	thickness(half)	3.2			blade part	complete
width(3 quarter)	9.2	thickness(3 quarter)	3.5			segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxv

simple name	blade, unretouched	period		size	55.7x12.9x3.8
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	55.7	max width	12.9	retouch			
width(quarter)	12.4	thickness(quarter)	3.8			termination	
width(half)	12.2	thickness(half)	3.4			blade part	medial
width(3 quarter)	11.7	thickness(3 quarter)	3.8			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxvi

simple name	blade, unretouched	period		size	37.4x14.4x6.9
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Hinge fracture.

max length	37.4	max width	14.4	retouch	dorsal right and left, ventral right and left		
width(quarter)	10.6	thickness(quarter)	4.2			termination	
width(half)	11.9	thickness(half)	5			blade part	medial
width(3 quarter)	13.4	thickness(3 quarter)	6.9			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573i

simple name	blade, unretouched	period		size	93.1x17.5x3.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Unretouched blade.

max length	93.1	max width	17.2	retouch			
width(quarter)	17	thickness(quarter)	3.6			termination	
width(half)	15.8	thickness(half)	3.8			blade part	complete
width(3 quarter)	12	thickness(3 quarter)	3.7			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573ii

simple name	blade, crested	period		size	109.5x15.9x5.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Crested blade, crested right with some cortex.

max length	110	max width	15.9	retouch	
width(quarter)	15.5	thickness(quarter)	4.2	termination	
width(half)	15.9	thickness(half)	4.1	blade part	complete
width(3 quarter)	14.7	thickness(3 quarter)	5.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573iii

simple name	blade, retouched	period		size	90x13x5.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Blade retouched, mainly dorsal right.

max length	90	max width	13	retouch	both
width(quarter)	13	thickness(quarter)	4.9	termination	
width(half)	13	thickness(half)	5.1	blade part	distal
width(3 quarter)	10.2	thickness(3 quarter)	5.3	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573iv

simple name	blade, crested	period		size	79.5x14.1x4.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Crested blade, crested right.

max length	79.5	max width	14.1	retouch	
width(quarter)	13	thickness(quarter)	4.5	termination	
width(half)	14	thickness(half)	4.1	blade part	complete
width(3 quarter)	13.3	thickness(3 quarter)	2.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573v

simple name	blade, unretouched	period		size	80.7x13.7x3.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Unretouched blade.

max length	80.7	max width	13.7	retouch	
width(quarter)	13.7	thickness(quarter)	3.9	termination	
width(half)	12.5	thickness(half)	3.6	blade part	complete
width(3 quarter)	12.2	thickness(3 quarter)	3	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573vi

simple name	blade, unretouched	period		size	89.7x15.2x3.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Twisted unretouched blade with previous hinge fracture.

max length	89.7	max width	15.2	retouch	
width(quarter)	13.5	thickness(quarter)	2.2	termination	
width(half)	11.6	thickness(half)	3.2	blade part	complete
width(3 quarter)	9.3	thickness(3 quarter)	3.5	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573vii

simple name	blade, unretouched	period		size	80.8x18.xx3.9
functional name		colour	mid brown striated	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Unretouched.

max length	80.8	max width	18.4	retouch	
width(quarter)	17.7	thickness(quarter)	3.6	termination	
width(half)	15.8	thickness(half)	3.9	blade part	complete
width(3 quarter)	11.8	thickness(3 quarter)	3.5	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573viii

simple name	blade, unretouched	period		size	75.2x16.2x5.5
functional name		colour	mid brown striated	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Unretouched.

max length	75.2	max width	16.2	retouch	
width(quarter)	15.6	thickness(quarter)	4.4	termination	
width(half)	15	thickness(half)	5.5	blade part	medial
width(3 quarter)	11.5	thickness(3 quarter)	4.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573ix

simple name	blade, unretouched	period		size	63x16x5.7
functional name		colour	mid brown striated	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Unretouched.

max length	63	max width	16	retouch	
width(quarter)	15	thickness(quarter)	5.7	termination	
width(half)	14.8	thickness(half)	5.1	blade part	proximal
width(3 quarter)	13.2	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573x

simple name	blade	period		size	66.2x12.8x4.2
functional name		colour	mid brown striated	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Distal blade, trample or retouch ventral right and left.

max length	66.2	max width	12.8	retouch	
width(quarter)	11.8	thickness(quarter)	4.2	termination	
width(half)	12.8	thickness(half)	4.1	blade part	distal
width(3 quarter)	11.1	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xi

simple name	blade, retouched	period		size	59.5x15.9x4.4
functional name		colour	mid brown striated	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Proximal blade retouched dorsal proximal end.

max length	59.5	max width	15.9	retouch			
width(quarter)	15.9	thickness(quarter)	3			termination	
width(half)	15.3	thickness(half)	4.4			blade part	proximal
width(3 quarter)	14.2	thickness(3 quarter)	4			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xii

simple name	blade, unretouched	period		size	95.2x17.5x4.2
functional name		colour	mid brown striated	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Proximal blade.

max length	95.2	max width	17.5	retouch			
width(quarter)	16.5	thickness(quarter)	2.8			termination	
width(half)	15.9	thickness(half)	3.4			blade part	proximal
width(3 quarter)	12.2	thickness(3 quarter)	4.2			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xiii

simple name	blade, retouched	period		size	58.9x12.2x5.6
functional name		colour	orange/brown gloss	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Distal blade. ventral retouch right.

max length	58.9	max width	12.2	retouch			
width(quarter)	11.8	thickness(quarter)	4.8			termination	
width(half)	12.2	thickness(half)	5.6			blade part	distal
width(3 quarter)	12	thickness(3 quarter)	5.4			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xiv

simple name	blade, retouched	period		size	67.5x13.4z4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Distal blade, reteouch dorsal right.

max length	67.5	max width	13.4	retouch	dorsal right
width(quarter)	12.7	thickness(quarter)	3.3	termination	
width(half)	13.4	thickness(half)	4	blade part	distal
width(3 quarter)	12.5	thickness(3 quarter)	3.7	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xv

simple name	blade, unretouched	period		size	71.71x18.4x7.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Distal blade.

max length	71.7	max width	18.4	retouch	
width(quarter)	17.5	thickness(quarter)	4.4	termination	
width(half)	16.7	thickness(half)	5.1	blade part	distal
width(3 quarter)	14.7	thickness(3 quarter)	7.5	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xvi

simple name	blade, retouched	period		size	69.5x10.9x4.8
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Complete blade worn on retouch and arris at proximal end.

max length	69.5	max width	10.9	retouch	ventral right and left
width(quarter)	10.3	thickness(quarter)	4.7	termination	
width(half)	10.7	thickness(half)	4.8	blade part	complete
width(3 quarter)	8.8	thickness(3 quarter)	4.2	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xvii
simple name	blade, crested?	period		size	74.8x13.4x3.5
functional name		colour	mid brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Proximal blade, possibly crested.				

max length	74.8	max width	13.4	retouch	
width(quarter)	11.4	thickness(quarter)	3.5	termination	
width(half)	11	thickness(half)	3	blade part	proximal
width(3 quarter)	12	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xviii
simple name	blade, unretouched	period		size	44.1x12x4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Distal blade.				

max length	44.1	max width	12	retouch	
width(quarter)	11.1	thickness(quarter)	4	termination	
width(half)	11.6	thickness(half)	3.7	blade part	distal
width(3 quarter)	12	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xix
simple name	blade, unretouched	period		size	55.8x16.6x5.4
functional name		colour	very dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Proximal.				

max length	55.8	max width	16.6	retouch	
width(quarter)	12.2	thickness(quarter)	4.7	termination	
width(half)	14.7	thickness(half)	5.4	blade part	proximal
width(3 quarter)	16.6	thickness(3 quarter)	5.4	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xx

simple name	blade, unretouched	period		size	33.9x12.4x4.8
functional name		colour	very dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Proximal.

max length	33.9	max width	12.4	retouch	dorsal both		
width(quarter)	12	thickness(quarter)	4.8			termination	
width(half)	12.4	thickness(half)	4.5			blade part	proximal
width(3 quarter)	12.3	thickness(3 quarter)	4.3			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxi

simple name	blade, retouched	period		size	27.4x12.8x4
functional name		colour	very dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Medial.

max length	27.4	max width	12.8	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	4			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxii

simple name	blade, retouched	period		size	31.8x11.7x3.2
functional name		colour	very dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Medial.

max length	31.8	max width	11.7	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	3.2			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxiii
simple name	blade	period		size	70.5x17.3x4.9
functional name		colour	mid brown/orange	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Proximal blade with steep dorsal retouch at distal end.				

max length	70.7	max width	17.3	retouch	dorsal
width(quarter)	14.6	thickness(quarter)	4.9	termination	
width(half)	17.4	thickness(half)	4.7	blade part	proximal
width(3 quarter)	17.7	thickness(3 quarter)	4.4	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxiv
simple name	blade	period		size	38.1x14.7x5.8
functional name		colour	mid brown/orange	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Medial blade with steep dorsal retouch at proximal end.				

max length	38.1	max width	14.7	retouch	dorsal
width(quarter)	14.2	thickness(quarter)	5.8	termination	
width(half)	14.2	thickness(half)	5.3	blade part	medial
width(3 quarter)	14.1	thickness(3 quarter)	5	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxv
simple name	blade	period		size	37.4x12.7x5
functional name		colour	mid brown/orange	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Unretouched proximal blade.				

max length	37.4	max width	12.5	retouch	
width(quarter)	12.7	thickness(quarter)	4	termination	
width(half)	11.6	thickness(half)	5	blade part	proximal
width(3 quarter)		thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxvi

simple name	blade, unretouched	period		size	31.6x14.5x4.6
functional name		colour	mid brown/orange	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Irregular retouch dorsal right and ventral right.

max length	31.6	max width	14.5	retouch	both		
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	4.6			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxvii

simple name	blade, unretouched	period		size	53.5x19.4x3.6
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Broken blade, unretouched, proximal.

max length	53.5	max width	19.4	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	3.6			blade part	proximal
width(3 quarter)		thickness(3 quarter)				segmented/truncated	segmented

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxviii

simple name	blade, backed	period		size	36.3x16.7x4
functional name		colour	dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	Backed blade (steep left dorsal retouch).

max length	36.3	max width	16.7	retouch	both		
width(quarter)	16.3	thickness(quarter)	3.7			termination	
width(half)	16	thickness(half)	4			blade part	medial
width(3 quarter)	15.1	thickness(3 quarter)	4			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxix

simple name	blade	period		size	54.6x19.8x6
functional name		colour	dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description: Heavily worn and patinated blade.

max length	54.6	max width	19.8	retouch	ventral
width(quarter)	18.6	thickness(quarter)	5.7	termination	
width(half)	17.8	thickness(half)	5.2	blade part	medial
width(3 quarter)	15.8	thickness(3 quarter)	6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxx

simple name	blade	period		size	36.2x13.7x2.6
functional name		colour	dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	36.2	max width	13.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	2.6	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7573xxxi

simple name	blade	period		size	26x15.5x2.2
functional name		colour	dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description: Proximal end of blade.

max length	26	max width	15.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	2.2	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7332

simple name	axe fragment?	period		size	83.6x62.2x15.8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacially worked fragment, presumed part of an axe.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC16739

simple name	adze	period	New Kingdom, 18th Dynasty (d	size	117x74.8x15.5
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references	Spurrell in Petrie 1891, 52, pl. VII no.9. Spurrell dates it to the 18th Dynasty as it was found in a burial with scarabs of 18th Dynasty date and because it looks different from other Middle Kingdom forms.				
description	Adze with part of cortex remaining. Labelled K4106/11080. Finely made.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570i

simple name	bifacial snake shape	period		size	98.4x27.9x6.9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial snake shape, broken with steep retouch.				

max length	98.4	max width	27.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570ii

simple name	?knife handle	period		size	42.3x23x5.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Possibly part of a knife handle Seitenbezogenheit.

max length	42.3	max width	23	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.6			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570iii

simple name	?knife fragment	period		size	50.4x30.3x10.1
functional name		colour	midbrown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Possibly part of a knife blade Seitenbezogenheit.

max length	50.4	max width	30.3	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	10.1			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570iv

simple name	knife fragment	period		size	96.8x27.2x5.3
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Knife blade of very black flint or obsidian. Note 7569/15 is also broad and very dark brown.

max length	96.8	max width	27.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.3			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570v

simple name	knife fragment	period		size	65.3x29.5x7.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?reused knife blade.

max length	65.3	max width	29.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570vi

simple name	knife fragment	period		size	71x23.7x5.9
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?knife blade. Sinious edge on profile.

max length	71	max width	23.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570vii

simple name	knife fragemnt	period		size	45.1x32x7.4
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?knife blade. Sinious edge on profile.

max length	45.1	max width	32	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570viii

simple name	knife fragemnt	period		size	37.5x30x6.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?Knife blade.

max length	37.5	max width	30	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570ix

simple name	knife fragment	period		size	68x33.4x7.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?knife blade.

max length	68	max width	33.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570x

simple name	knife fragement	period		size	53.7x35.6x8.3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?knife blade.

max length	53.7	max width	35.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xi

simple name	knife fragment	period		size	40.9x41x8.4
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade.				

max length	40.9	max width	41	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xii

simple name	knife fragment	period		size	54.9x46.6x5.6
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade.				

max length	54.9	max width	46.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xiii

simple name	knife fragment	period		size	54.3x49.3x6.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade Seitenbezogenheit.				

max length	54.3	max width	49.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xiv

simple name	knife fragment	period		size	74x34.4x8.9
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade Seitenbezogenheit.				

max length	74	max width	34.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xv

simple name	knife fragment	period		size	64.7x35.7x8.4
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade.				

max length	64.7	max width	35.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xvi

simple name	knife fragment	period		size	58.6x33.4x7
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade.				

max length	58.6	max width	33.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xvii
simple name	knife fragment	period		size	41.4x29.4x7.5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade.				
max length	41.4	max width	29.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xviii
simple name	knife fragment	period		size	54.5x29.8x7.7
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade Seitenbezogenheit.				
max length	54.5	max width	29.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xix
simple name	knife fragment	period		size	63.1x28x5.8
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	?knife blade.				
max length	63.1	max width	28	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xx

simple name	knife fragment	period		size	62.6x63x9.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description ?knife blade.

max length	62.6	max width	63	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xxi

simple name	knife fragment	period		size	59.3x30.3x6.8
functional name		colour	dark grey/brown	shape	
excavation no		house/tomb		context	

date evidence

references

description ?knife blade.

max length	59.3	max width	30.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xxii

simple name	knife fragment	period		size	60.5x39.3x6.8
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	

date evidence

references

description ?knife blade.

max length	60.5	max width	39.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xxiii

simple name	knife fragment	period		size	52.3x37.4x8.9
functional name		colour	mid-dark grey	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?knife blade.

max length	52.3	max width	37.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xxiv

simple name	knife fragment	period		size	
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	?knife blade.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7570xxv

simple name	knife fragment	period		size	62.3x60.5x6.5
functional name		colour	black	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Knife blade of very black flint or obsidian. Note 7569/15 is also broad and very dark brown.

max length	62.3	max width	60.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(1)

simple name	blade, retouched	period		size	97.6x14.6x6.5
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Retouched blade.

max length	96.7	max width	14.6	retouch	dorsal, lateral, right and left
width(quarter)	12.9	thickness(quarter)	6	termination	
width(half)	14.6	thickness(half)	6.5	blade part	complete
width(3 quarter)	13.7	thickness(3 quarter)	6.7	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(2)

simple name	blade, unretouched	period		size	76.9x18x3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Unretouched blade.

max length	76.9	max width	18	retouch	
width(quarter)	18	thickness(quarter)	3	termination	
width(half)	15	thickness(half)	3	blade part	complete
width(3 quarter)	11.2	thickness(3 quarter)	2.5	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(3)

simple name	blade, unretouched	period		size	69.2x22x5.1
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Unretouched blade.

max length	69.2	max width	22	retouch	
width(quarter)	22	thickness(quarter)	7.3	termination	
width(half)	19.2	thickness(half)	5.1	blade part	complete
width(3 quarter)	16.7	thickness(3 quarter)	4.4	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(4)
simple name	blade, unretouched	period		size	82.2x14.8x4.9
functional name		colour		shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Unretouched blade.				

max length	82.2	max width	14.8	retouch	
width(quarter)	13.8	thickness(quarter)	4.9	termination	
width(half)	14.8	thickness(half)	5.2	blade part	complete
width(3 quarter)	12.4	thickness(3 quarter)	5.7	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(5)
simple name	blade, unretouched	period		size	73.3x17.7x4.7
functional name		colour		shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Unretouched blade.				

max length	73.3	max width	17.7	retouch	
width(quarter)	14	thickness(quarter)	4.7	termination	
width(half)	17.6	thickness(half)	4.7	blade part	complete
width(3 quarter)	17.7	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(6)
simple name	blade, unretouched	period		size	61.8x16.5x3.8
functional name		colour		shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Unretouched blade.				

max length	61.8	max width	16.5	retouch	
width(quarter)	15.2	thickness(quarter)	4	termination	
width(half)	16.5	thickness(half)	3.8	blade part	complete
width(3 quarter)	15.2	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(7)

simple name	blade, retouched	period		size	57.2x14.4x2.9
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Retouched blade.

max length	57.2	max width	14.4	retouch	dorsal, lateral, left
width(quarter)	13.2	thickness(quarter)	3	termination	
width(half)	14.4	thickness(half)	2.9	blade part	complete
width(3 quarter)	13	thickness(3 quarter)	2.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(8)

simple name	blade, unretouched	period		size	46.5x10.1x4.4
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Unretouched blade.

max length	46.5	max width	10.1	retouch	
width(quarter)	10.1	thickness(quarter)	4	termination	
width(half)	9.4	thickness(half)	4.4	blade part	proximal
width(3 quarter)	9.9	thickness(3 quarter)	3.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(9)

simple name	blade, unretouched	period		size	71.1x16.4x2.9
functional name		colour		shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description: Unretouched blade.

max length	71.1	max width	16.4	retouch	
width(quarter)	16.4	thickness(quarter)	3	termination	
width(half)	11.8	thickness(half)	2.9	blade part	proximal
width(3 quarter)	11	thickness(3 quarter)	2.4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(10)

simple name	blade, retouched	period		size	79x16.1x3.5
functional name		colour		shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description: Retouched blade-steep retouch left dorsal.

max length	79	max width	16.1	retouch	dorsal, left
width(quarter)	16.1	thickness(quarter)	3.6	termination	
width(half)	16	thickness(half)	3.5	blade part	proximal
width(3 quarter)	14.2	thickness(3 quarter)	2.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(11)

simple name	blade, unretouched	period		size	27x12.9x4.6
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Unretouched blade.

max length	27	max width	12.9	retouch	
width(quarter)	12.9	thickness(quarter)		termination	
width(half)		thickness(half)	4.6	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(12)

simple name	blade, retouched	period		size	67.6x16x5.2
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Retouched blade. Mainly dorsal left with some wear or irregular retouch on dorsal right. Some retouch ventral right

max length	67.6	max width	16	retouch	dorsal, left, some ventral right
width(quarter)	16	thickness(quarter)	4.9	termination	
width(half)	14.2	thickness(half)	5.2	blade part	proximal
width(3 quarter)	12.8	thickness(3 quarter)	4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(13)

simple name	blade, crested	period		size	65.1x15.2x4.9
functional name		colour		shape	irregular
excavation no		house/tomb		context	

date evidence

references

description ?crested blade.

max length	65.1	max width	15.2	retouch	both
width(quarter)	15.2	thickness(quarter)	4.1	termination	
width(half)	13.9	thickness(half)	4.9	blade part	proximal
width(3 quarter)	14	thickness(3 quarter)	4.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(14)

simple name	blade, crested	period		size	69x16.5x3.9
functional name		colour		shape	irregular
excavation no		house/tomb		context	

date evidence

references

description Snakey shaped blade, crested left.

max length	69	max width	16.5	retouch	crested
width(quarter)	16.5	thickness(quarter)	3.8	termination	
width(half)	16	thickness(half)	3.9	blade part	complete
width(3 quarter)	10.2	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(15)

simple name	blade, retouched	period		size	56.9x14.6x2.9
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade retouched dorsal right.

max length	56.9	max width	14.6	retouch	dorsal right
width(quarter)	14.6	thickness(quarter)	2.9	termination	
width(half)	12.3	thickness(half)	3.1	blade part	proximal
width(3 quarter)	12.2	thickness(3 quarter)	3.3	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(16)

simple name	blade, unretouched	period		size	69.3x19.9x4.5
functional name		colour	grey	shape	irregular
excavation no		house/tomb		context	

date evidence

references

description: Unretouched blade.

max length	69.3	max width	19.9	retouch	
width(quarter)	17.6	thickness(quarter)	4.5	termination	
width(half)	19.9	thickness(half)	4	blade part	complete
width(3 quarter)	14.3	thickness(3 quarter)	3.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(17)

simple name	blade, unretouched	period		size	64.2x15x2.1
functional name		colour	orange brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Unretouched blade.

max length	64.2	max width	15	retouch	
width(quarter)	15	thickness(quarter)	2.1	termination	
width(half)	13.2	thickness(half)	2.1	blade part	proximal
width(3 quarter)	12.1	thickness(3 quarter)	2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(18)

simple name	blade, unretouched	period		size	49.3x15.3x2.7
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	49.3	max width	15.3	retouch	
width(quarter)	15.3	thickness(quarter)	2.9	termination	
width(half)	12.7	thickness(half)	2.7	blade part	proximal
width(3 quarter)	13.1	thickness(3 quarter)	2.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(19)

simple name	blade, retouched	period		size	53.5x15.4x3.3
functional name		colour	pink	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	53.5	max width	15.4	retouch	dorsal, right		
width(quarter)	15.4	thickness(quarter)	3.1			termination	
width(half)	14.5	thickness(half)	3.3			blade part	proximal
width(3 quarter)	14.6	thickness(3 quarter)	3			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(20)

simple name	blade, unretouched	period		size	49.7x14.2x3.7
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	49.7	max width	14.2	retouch			
width(quarter)	14.2	thickness(quarter)	3.8			termination	
width(half)	14	thickness(half)	3.7			blade part	proximal
width(3 quarter)	14	thickness(3 quarter)	3.5			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(21)

simple name	blade, unretouched	period		size	56.8x15.5x3.1
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	56.8	max width	15.5	retouch			
width(quarter)	15.5	thickness(quarter)	2.7			termination	
width(half)	15	thickness(half)	3.1			blade part	proximal
width(3 quarter)	14.7	thickness(3 quarter)	2.8			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(22)

simple name	blade, unretouched	period		size	49.6x17.4x3.1
functional name		colour		shape	broad
excavation no		house/tomb		context	

date evidence

references

description

max length	49.6	max width	17.4	retouch	
width(quarter)	17.4	thickness(quarter)	2.7	termination	
width(half)	17	thickness(half)	3.1	blade part	proximal
width(3 quarter)	15	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(23)

simple name	blade, unretouched	period		size	58x17.1x3.1
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	58	max width	17.1	retouch	
width(quarter)	17.1	thickness(quarter)	3.5	termination	
width(half)	16.3	thickness(half)	3.1	blade part	proximal
width(3 quarter)	13.5	thickness(3 quarter)	2.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(24)

simple name	blade, unretouched	period		size	50.5x11.1x3.5
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	50.5	max width	11.1	retouch	
width(quarter)	9.6	thickness(quarter)	3.3	termination	
width(half)	9.8	thickness(half)	3.5	blade part	proximal
width(3 quarter)	11.1	thickness(3 quarter)	3.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(25)

simple name	blade, unretouched	period		size	63.2x16x5.4
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	63.2	max width	16	retouch	
width(quarter)	16	thickness(quarter)	4.9	termination	
width(half)	14.5	thickness(half)	5.4	blade part	proximal
width(3 quarter)	13.2	thickness(3 quarter)	6.3	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(26)

simple name	blade, unretouched	period		size	46.4x10.2x4
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	46.4	max width	10.2	retouch	
width(quarter)	9.8	thickness(quarter)	4	termination	
width(half)	10.2	thickness(half)	4	blade part	proximal
width(3 quarter)	9.3	thickness(3 quarter)	3.9	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(27)

simple name	blade, unretouched	period		size	63.4x20.2x5.2
functional name		colour		shape	broad
excavation no		house/tomb		context	

date evidence	
references	
description	Unretouched blade with previous hinge fracture.

max length	63.4	max width	20.2	retouch	
width(quarter)	19.7	thickness(quarter)	4.5	termination	
width(half)	20.2	thickness(half)	5.2	blade part	proximal
width(3 quarter)	17.5	thickness(3 quarter)	7.5	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(28)

simple name	blade, unretouched	period		size	69.2x12.7x3.2
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	69.2	max width	12.7	retouch			
width(quarter)	12.7	thickness(quarter)	3.4			termination	
width(half)	11.4	thickness(half)	3.2			blade part	proximal
width(3 quarter)	10	thickness(3 quarter)	2.4			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(29)

simple name	blade, unretouched	period		size	58x19x3
functional name		colour		shape	broad
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	58	max width	19	retouch			
width(quarter)	19	thickness(quarter)	3.3			termination	
width(half)	18.6	thickness(half)	3			blade part	proximal
width(3 quarter)	15.3	thickness(3 quarter)	3			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(30)

simple name	blade, unretouched	period		size	41.2x15.1x2.3
functional name		colour		shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	41.2	max width	15.1	retouch			
width(quarter)	13.8	thickness(quarter)	2			termination	
width(half)	14.7	thickness(half)	2.3			blade part	proximal
width(3 quarter)	15.1	thickness(3 quarter)	2.7			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(31)

simple name	blade, unretouched	period		size	45.3x15.8x3.3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	45.3	max width	15.8	retouch			
width(quarter)	15.8	thickness(quarter)	3.3			termination	
width(half)	14.2	thickness(half)	3.3			blade part	proximal
width(3 quarter)	11.6	thickness(3 quarter)	3.6			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(32)

simple name	blade, unretouched	period		size	59.5x15.6x4.6
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	59.5	max width	15.6	retouch			
width(quarter)	15.6	thickness(quarter)	3.7			termination	
width(half)	13.6	thickness(half)	4.6			blade part	proximal
width(3 quarter)	12	thickness(3 quarter)	4.9			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(33)

simple name	blade, retouched	period		size	67.8x14.5x5.2
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	67.8	max width	14.5	retouch	ventral, left		
width(quarter)	14.5	thickness(quarter)	5			termination	
width(half)	14.2	thickness(half)	5.2			blade part	proximal
width(3 quarter)	14.5	thickness(3 quarter)	5.6			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(34)

simple name	blade, unretouched	period		size	39.5x13.8x2.5
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	39.5	max width	13.8	retouch	
width(quarter)	13.8	thickness(quarter)	2.5	termination	
width(half)	10.2	thickness(half)	2.5	blade part	proximal
width(3 quarter)	9.6	thickness(3 quarter)	3.1	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(35)

simple name	blade, unretouched	period		size	49.5x14.6x2.9
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	49.5	max width	14.6	retouch	
width(quarter)	14.6	thickness(quarter)	2.7	termination	
width(half)	14.6	thickness(half)	2.9	blade part	proximal
width(3 quarter)	14.1	thickness(3 quarter)	3	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(36)

simple name	blade, unretouched	period		size	42.1x12.9x3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	42.1	max width	12.9	retouch	
width(quarter)	12.9	thickness(quarter)	3	termination	
width(half)	12.5	thickness(half)	3	blade part	medial
width(3 quarter)	10.5	thickness(3 quarter)	2.7	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(37)

simple name	blade, unretouched	period		size	31.2x16x3.3
functional name		colour		shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	31.2	max width	16	retouch	dorsal, left and ventral, left
width(quarter)	16	thickness(quarter)	3.2	termination	
width(half)	15.5	thickness(half)	3.3	blade part	medial
width(3 quarter)	13	thickness(3 quarter)	3.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(38)

simple name	blade, unretouched	period		size	35.2x12.8x3.6
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	35.2	max width	12.8	retouch	
width(quarter)	12.8	thickness(quarter)	3.2	termination	
width(half)	12.6	thickness(half)	3.6	blade part	medial
width(3 quarter)	10	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(39)

simple name	blade, unretouched	period		size	60.2x12.2x4.7
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	60.2	max width	12.2	retouch	dorsal right
width(quarter)	12.2	thickness(quarter)	3.7	termination	
width(half)	10.5	thickness(half)	4.7	blade part	medial
width(3 quarter)	11	thickness(3 quarter)	3.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(40)

simple name	blade, unretouched	period		size	64.2x13x4.3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	64.2	max width	13	retouch	ventral, right
width(quarter)	13	thickness(quarter)	3.7	termination	
width(half)	11.1	thickness(half)	4.3	blade part	medial
width(3 quarter)	11	thickness(3 quarter)	3.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(41)

simple name	blade,, unretouched	period		size	38.1x11.4x4
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	38.1	max width	11.4	retouch	
width(quarter)	11.4	thickness(quarter)	2.9	termination	
width(half)	9.8	thickness(half)	4	blade part	medial
width(3 quarter)	8.9	thickness(3 quarter)	3.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(42)

simple name	blade, retouched	period		size	33.6x14.5x3.5
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	33.6	max width	14.9	retouch	dorsal, right, steep
width(quarter)	14.5	thickness(quarter)	4	termination	
width(half)	14.9	thickness(half)	3.5	blade part	medial
width(3 quarter)	13.5	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(43)

simple name	blade, unretouched	period		size	25x14.8x3.2
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	25	max width	14.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	14.8	thickness(half)	3.2	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(44)

simple name	blade, unretouched	period		size	31x17.3x3.3
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	31	max width	17.3	retouch	
width(quarter)	17.3	thickness(quarter)	3.5	termination	
width(half)	17.3	thickness(half)	3.3	blade part	medial
width(3 quarter)	17	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(45)

simple name	blade, sickle	period		size	49.9x13.8x2.8
functional name	sickle	colour		shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	49.9	max width	13.8	retouch	dorsal right and dorsal, proximal
width(quarter)	13.8	thickness(quarter)	2.5	termination	
width(half)	12.3	thickness(half)	2.8	blade part	medial
width(3 quarter)	13.5	thickness(3 quarter)	2	segmented/truncated	
wear	gloss, ventral left				

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(46)

simple name	blade, sickle	period		size	58.5x12.9x2.7
functional name	sickle	colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	58.5	max width	12.9	retouch	ventral left		
width(quarter)	12.9	thickness(quarter)	3			termination	
width(half)	10.4	thickness(half)	2.7			blade part	medial
width(3 quarter)	8.2	thickness(3 quarter)	3.2			segmented/truncated	

wear	gloss, dorsal right

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(47)

simple name	blade	period		size	44.5x13.3x3.8
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	44.5	max width	13.3	retouch	dorsal, right and ventral left		
width(quarter)	13.3	thickness(quarter)	4			termination	
width(half)	13.3	thickness(half)	3.8			blade part	medial
width(3 quarter)	12	thickness(3 quarter)	3.7			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(48)

simple name	blade, unretouched	period		size	48.5x9x3.2
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	48.5	max width	9	retouch			
width(quarter)	9	thickness(quarter)	4.2			termination	
width(half)	9	thickness(half)	3.2			blade part	medial
width(3 quarter)	8.5	thickness(3 quarter)	2.7			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(49)

simple name	blade, retouched	period		size	31.6x10.9x2.2
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	31.6	max width	10.9	retouch	dorsal both
width(quarter)	10.9	thickness(quarter)	2.2	termination	
width(half)	9.6	thickness(half)	2.2	blade part	medial
width(3 quarter)	9.7	thickness(3 quarter)	2.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(50)

simple name	blade, crested	period		size	48.1x9.3x3.9
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	48.1	max width	9.3	retouch	crested, both
width(quarter)	9.3	thickness(quarter)	4.1	termination	
width(half)	8	thickness(half)	3.9	blade part	medial
width(3 quarter)	9.1	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(51)

simple name	blade, retouched	period		size	52.5x16.2x4.2
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	52.5	max width	16.2	retouch	ventral, right
width(quarter)	16.2	thickness(quarter)	3.2	termination	
width(half)	12.5	thickness(half)	4.2	blade part	medial
width(3 quarter)	8.3	thickness(3 quarter)	2.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(52)

simple name	blade, retouched	period		size	61x15.6x2.5
functional name		colour		shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	61	max width	15.6	retouch	dorsal, proximal
width(quarter)	15.6	thickness(quarter)	3	termination	
width(half)	15	thickness(half)	2.5	blade part	medial
width(3 quarter)	14.9	thickness(3 quarter)	2.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(53)

simple name	blade, retouched	period		size	58.5x12.9x6
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	58.5	max width	12.9	retouch	dorsal both
width(quarter)	12.9	thickness(quarter)	8.4	termination	
width(half)	10.8	thickness(half)	6	blade part	distal
width(3 quarter)	10.7	thickness(3 quarter)	4.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(54)

simple name	blade, unretouched	period		size	60.1x15.9x3.8
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	60.1	max width	13.4	retouch	
width(quarter)	13.4	thickness(quarter)	4.1	termination	
width(half)	14.2	thickness(half)	3.8	blade part	proximal
width(3 quarter)	15.9	thickness(3 quarter)	3.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(55)

simple name	blade, unretouched	period		size	16.7x15.4x3.2
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	46.7	max width	15.4	retouch			
width(quarter)	15.4	thickness(quarter)	3.6			termination	
width(half)	14.3	thickness(half)	3.2			blade part	distal
width(3 quarter)	12.2	thickness(3 quarter)	3.1			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(56)

simple name	blade, unretouched	period		size	42.8x14.2x5
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	42.8	max width	14.2	retouch			
width(quarter)	14.2	thickness(quarter)	4.8			termination	
width(half)	13.2	thickness(half)	5			blade part	distal
width(3 quarter)	9.6	thickness(3 quarter)	2.8			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(57)

simple name	blade, unretouched	period		size	35x7.8x2.6
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	35	max width	7.8	retouch			
width(quarter)	7.5	thickness(quarter)	2.8			termination	
width(half)	7.3	thickness(half)	2.6			blade part	distal
width(3 quarter)	7.8	thickness(3 quarter)	1.9			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(58)

simple name	blade, retouched	period		size	37.9x13.7x3.6
functional name		colour	translucent	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	37.9	max width	13.7	retouch	dorsal, distal
width(quarter)	13.5	thickness(quarter)	3.3	termination	
width(half)	13.7	thickness(half)	3.6	blade part	distal
width(3 quarter)	12.3	thickness(3 quarter)	2.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(59)

simple name	blade, unretouched	period		size	42.1x10.8x3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	42.1	max width	10.8	retouch	
width(quarter)	10	thickness(quarter)	2.8	termination	
width(half)	10.8	thickness(half)	3	blade part	distal
width(3 quarter)	10.2	thickness(3 quarter)	2.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(60)

simple name	blade, unretouched	period		size	65.2x15.4x3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	65.2	max width	15.4	retouch	
width(quarter)	15.4	thickness(quarter)	3.1	termination	
width(half)	13.4	thickness(half)	3	blade part	distal
width(3 quarter)	13.3	thickness(3 quarter)	2.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(61)

simple name	blade, retouched	period		size	36.2x11.2x3.4
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	36.2	max width	11.2	retouch	dorsal, left
width(quarter)	11.2	thickness(quarter)	3.3	termination	
width(half)	10.8	thickness(half)	3.4	blade part	distal
width(3 quarter)	10.1	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(62)

simple name	blade, unretouched	period		size	35.1x10.6x3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	35.1	max width	10.6	retouch	
width(quarter)	10.6	thickness(quarter)	3.3	termination	
width(half)	10.3	thickness(half)	3	blade part	distal
width(3 quarter)	9.2	thickness(3 quarter)	1.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(63)

simple name	blade, unretouched	period		size	68.4x14.9x4.8
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	68.4	max width	14.9	retouch	
width(quarter)	14.9	thickness(quarter)	3	termination	
width(half)	13.4	thickness(half)	4.8	blade part	distal
width(3 quarter)	12.2	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(64)

simple name	blade, unretouched	period		size	48x9.9x3.4
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	48	max width	9.9	retouch			
width(quarter)	9.9	thickness(quarter)	3.2			termination	
width(half)	8.9	thickness(half)	3.4			blade part	distal
width(3 quarter)	8.1	thickness(3 quarter)	2.5			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(65)

simple name	blade, unretouched	period		size	36.8x13.8x3
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	36.8	max width	13.8	retouch			
width(quarter)	13.8	thickness(quarter)	2.9			termination	
width(half)	13.7	thickness(half)	3			blade part	distal
width(3 quarter)	12.1	thickness(3 quarter)	2.9			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xviii(66)

simple name	blade, unretouched	period		size	45.4x14.3x2.6
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	45.4	max width	14.3	retouch			
width(quarter)	14.3	thickness(quarter)	2.8			termination	
width(half)	12.5	thickness(half)	2.6			blade part	distal
width(3 quarter)	9.1	thickness(3 quarter)	1.9			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvii(1)

simple name	blade, retouched	period		size	81x12x3
functional name		colour		shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	81	max width	12	retouch	dorsal, right and distal and ventral left		
width(quarter)	12	thickness(quarter)	3.5			termination	
width(half)	9.5	thickness(half)	3			blade part	distal
width(3 quarter)	9.3	thickness(3 quarter)	3.2			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvii(2)

simple name	blade, retouched, lateral	period		size	
functional name	sickle	colour	cream	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	distal
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	gloss, dorsal right and ventral left

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527i(1)

simple name	knife fragment	period		size	83.6x44x6.5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	83.6	max width	44	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.5			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xii(1)

simple name	blade, retouched	period		size	41.9x17.6x5.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade marked K33.

max length	41.9	max width	17.6	retouch	ventral, left and dorsal right
width(quarter)	12.7	thickness(quarter)	4.5	termination	
width(half)	15.4	thickness(half)	5.1	blade part	proximal
width(3 quarter)	17.6	thickness(3 quarter)	5.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xii(2)

simple name	blade, retouched	period		size	63.8x14.4x3.9
functional name		colour	orange brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K33.

max length	63.8	max width	14.4	retouch	dorsal both
width(quarter)	14.4	thickness(quarter)	3.5	termination	
width(half)	13.5	thickness(half)	3.9	blade part	medial
width(3 quarter)	12	thickness(3 quarter)	3.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vii(1)

simple name	blade, unretouched	period		size	54x13.3x3.9
functional name		colour	pink/brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K18.

max length	54	max width	14	retouch	
width(quarter)	13.3	thickness(quarter)	4.6	termination	
width(half)	14	thickness(half)	3.9	blade part	proximal
width(3 quarter)	10.6	thickness(3 quarter)	2.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vii(2)

simple name	blade, unretouched	period		size	54.2x14.1x4.5
functional name		colour	pink/brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K19.

max length	54.2	max width	14.1	retouch	
width(quarter)	13.1	thickness(quarter)	4.3	termination	
width(half)	14	thickness(half)	4.5	blade part	proximal
width(3 quarter)	14.1	thickness(3 quarter)	4.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vii(3)

simple name	blade, unretouched	period		size	50.7x16.5x3
functional name		colour	pink/brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K18.

max length	50.7	max width	16.5	retouch	
width(quarter)	16.5	thickness(quarter)	3.4	termination	
width(half)	15.2	thickness(half)	3	blade part	proximal
width(3 quarter)	14.2	thickness(3 quarter)	2.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vii(4)

simple name	blade, unretouched	period		size	42.6x13.2x3.6
functional name		colour	pink/brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K18.

max length	42.6	max width	13.2	retouch	
width(quarter)	13.2	thickness(quarter)	3.2	termination	
width(half)	11.5	thickness(half)	3.6	blade part	distal
width(3 quarter)	8.6	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(1)

simple name	blade, retouched	period		size	63.2x14.6x3.6
functional name		colour	brown and orange	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	63.2	max width	14.6	retouch	dorsal, both
width(quarter)	14.4	thickness(quarter)	3.2	termination	
width(half)	14.6	thickness(half)	3.6	blade part	complete
width(3 quarter)	11.4	thickness(3 quarter)	6.8	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(2)

simple name	blade, unretouched	period		size	43.4x7.7x4
functional name		colour	brown orange	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	43.4	max width	7.7	retouch	
width(quarter)	7.5	thickness(quarter)	4	termination	
width(half)	7.7	thickness(half)	4	blade part	proximal
width(3 quarter)	8	thickness(3 quarter)	4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(3)

simple name	blade, retouched	period		size	77.5x13.6x4.7
functional name		colour	brown orange	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	77.5	max width	13.6	retouch	
width(quarter)	13.6	thickness(quarter)	4.5	termination	
width(half)	13.3	thickness(half)	4.7	blade part	complete
width(3 quarter)	11.4	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(4)

simple name	blade, unretouched	period		size	41.2x16.2x4.4
functional name		colour	cream	shape	irregular
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	41.2	max width	16.2	retouch	
width(quarter)	15.9	thickness(quarter)	5	termination	
width(half)	16.2	thickness(half)	4.4	blade part	proximal
width(3 quarter)	11.1	thickness(3 quarter)	4.3	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(5)

simple name	blade	period		size	70x16.3x4.3
functional name		colour	grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	70	max width	16.3	retouch	
width(quarter)	13.7	thickness(quarter)	5	termination	
width(half)	16.3	thickness(half)	4.3	blade part	proximal
width(3 quarter)	12	thickness(3 quarter)	4.5	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(6)

simple name	blade, unretouched	period		size	45.5x17.5x4.2
functional name		colour	mid pink grey	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	45.5	max width	17.5	retouch	
width(quarter)	17.5	thickness(quarter)	4.5	termination	
width(half)	16.2	thickness(half)	4.2	blade part	proximal
width(3 quarter)	15.4	thickness(3 quarter)	4.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(7)

simple name	blade, unretouched	period		size	65.1x17.8x3.8
functional name		colour	mid pink grey	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description: Blade with previous hinge fracture, marked NR.

max length	65.1	max width	17.8	retouch	
width(quarter)	17.8	thickness(quarter)	3.2	termination	
width(half)	16.6	thickness(half)	3.8	blade part	proximal
width(3 quarter)	17.2	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(8)

simple name	blade, unretouched	period		size	65.4x9.1x4.5
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Blade marked NR.

max length	65.4	max width	9.1	retouch	
width(quarter)	8.8	thickness(quarter)	4.5	termination	
width(half)	9.1	thickness(half)	5.5	blade part	proximal
width(3 quarter)	9	thickness(3 quarter)	4.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(9)

simple name	blade, unretouched	period		size	40.7x17.2x4.1
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description: Blade marked NR.

max length	40.7	max width	17.2	retouch	
width(quarter)	17.2	thickness(quarter)	4.7	termination	
width(half)	16.2	thickness(half)	4.1	blade part	
width(3 quarter)	15.4	thickness(3 quarter)	4.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(10)

simple name	blade, unretouched	period		size	40x13.5x2.9
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Blade marked NR.

max length	40	max width	12.8	retouch	
width(quarter)	13.5	thickness(quarter)	3	termination	
width(half)	12.8	thickness(half)	2.9	blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	4	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(11)

simple name	blade, retouched	period		size	37.2x14.8x4.7
functional name		colour	straited browns	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Blade marked NR.

max length	37.2	max width	14.8	retouch	
width(quarter)	13.6	thickness(quarter)	4.5	termination	
width(half)	14.8	thickness(half)	4.7	blade part	distal
width(3 quarter)	14.2	thickness(3 quarter)	4.4	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(12)

simple name	blade, unretouched	period		size	22.2x10.7x2.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Blade marked NR.

max length	22.2	max width	10.7	retouch	
width(quarter)	10.3	thickness(quarter)	2.7	termination	
width(half)	9.8	thickness(half)	2.5	blade part	distal
width(3 quarter)	10.7	thickness(3 quarter)	2.3	segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(13)

simple name	blade, unretouched	period		size	41.8x10x3.7
functional name		colour	cream	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	41.8	max width	10	retouch	
width(quarter)	10	thickness(quarter)	3.7	termination	
width(half)	8.6	thickness(half)	3.7	blade part	distal
width(3 quarter)	8.2	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527vi(14)

simple name	blade, retouched	period		size	34.9x11.3x3
functional name		colour	dark grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked NR.

max length	34.9	max width	11.3	retouch	
width(quarter)	10.5	thickness(quarter)	2.7	termination	
width(half)	10.1	thickness(half)	3	blade part	distal
width(3 quarter)	11.3	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(1)

simple name	blade, unretouched	period		size	38.6x19.2x4
functional name		colour	grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	38.6	max width	19.2	retouch	
width(quarter)	19.2	thickness(quarter)	4.7	termination	
width(half)	16.7	thickness(half)	4	blade part	proximal
width(3 quarter)	13.7	thickness(3 quarter)	3.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(2)

simple name	blade, unretouched	period		size	41.5x14.2x2,8
functional name		colour	grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	41.5	max width	14.2	retouch	
width(quarter)	8.4	thickness(quarter)	4	termination	
width(half)	10	thickness(half)	2.8	blade part	proximal
width(3 quarter)	14.2	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(3)

simple name	blade, unretouched	period		size	19.5x17x3.7
functional name		colour	mid-dar brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	49.5	max width	17	retouch	
width(quarter)	14	thickness(quarter)	4.1	termination	
width(half)	15	thickness(half)	3.9	blade part	proximal
width(3 quarter)	17	thickness(3 quarter)	3.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(4)

simple name	blade, unretouched	period		size	52.2x18.6x3.9
functional name		colour	dark orange brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	52.2	max width	18.6	retouch	
width(quarter)	18.6	thickness(quarter)	4.4	termination	
width(half)	17.7	thickness(half)	3.9	blade part	proximal
width(3 quarter)	14	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(5)

simple name	blade, unretouched	period		size	49.9x18.2x3
functional name		colour	grey	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	49.9	max width	18.2	retouch	
width(quarter)	18.2	thickness(quarter)	3.4	termination	
width(half)	15.7	thickness(half)	3	blade part	proximal
width(3 quarter)	16	thickness(3 quarter)	2.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(6)

simple name	blade, unretouched	period		size	38.6x13.8x3.5
functional name		colour	grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	38.6	max width	13.8	retouch	
width(quarter)	12.9	thickness(quarter)	3.7	termination	
width(half)	12.7	thickness(half)	3.5	blade part	?distal
width(3 quarter)	13.8	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(7)

simple name	blade, unretouched	period		size	53x16.8x4.1
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	53	max width	16.8	retouch	
width(quarter)	16.8	thickness(quarter)	4.1	termination	
width(half)	15.2	thickness(half)	3.8	blade part	distal
width(3 quarter)	14.8	thickness(3 quarter)	3	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(8)
simple name	blade, unretouched	period		size	35.9x11.7x2.2
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	35.9	max width	11.7	retouch	
width(quarter)	11.6	thickness(quarter)	2.5	termination	
width(half)	11.7	thickness(half)	2.2	blade part	medial
width(3 quarter)	10.3	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19966
simple name	blade, unretouched	period	Old Kingdom	size	40x8.6x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	40	max width	8.6	retouch	
width(quarter)	8.6	thickness(quarter)	2.7	termination	
width(half)	8.6	thickness(half)	2.4	blade part	medial
width(3 quarter)	8.4	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19967
simple name	blade, unretouched	period	Old Kingdom	size	22.9x10.7x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	22.9	max width	10.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	10.7	thickness(half)	2.7	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19968
simple name	blade, unretouched	period	Old Kingdom	size	36.3x12.5x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	36.3	max width	12.5	retouch	
width(quarter)	12.4	thickness(quarter)	2.7	termination	
width(half)	12.5	thickness(half)	2.6	blade part	medial
width(3 quarter)	12.4	thickness(3 quarter)	2.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19969
simple name	blade, unretouched	period	Old Kingdom	size	18.7x10.4x2.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	18.7	max width	10.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	10.4	thickness(half)	2.6	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19970
simple name	blade, unretouched	period	Old Kingdom	size	26.8x11.3x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	26.8	max width	11.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	11.3	thickness(half)	2.5	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19971

simple name	blade, unretouched	period	Old Kingdom	size	50.3x7.6x2.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	50.3	max width	7.6	retouch			
width(quarter)	7.6	thickness(quarter)	2.3			termination	
width(half)	7.5	thickness(half)	2.4			blade part	medial
width(3 quarter)	7.6	thickness(3 quarter)	1.8			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19972

simple name	blade, unretouched	period	Old Kingdom	size	18.4x9.5x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	18.4	max width	9.5	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)	9.5	thickness(half)	3			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19973

simple name	blade, unretouched	period	Old Kingdom	size	54.8x14.2x6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	54.5	max width	14.2	retouch			
width(quarter)	14.2	thickness(quarter)	6			termination	
width(half)	14.2	thickness(half)	6			blade part	medial
width(3 quarter)	13.2	thickness(3 quarter)	4.7			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19974
simple name	blade, unretouched	period	Old Kingdom	size	36.6x11.1x5.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	11' marked in pencil.				
max length	36.6	max width	11.1	retouch	
width(quarter)	11.1	thickness(quarter)	4.4	termination	
width(half)	10.4	thickness(half)	5	blade part	medial
width(3 quarter)	9.8	thickness(3 quarter)	5.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19975
simple name	blade, unretouched	period	Old Kingdom	size	63.8x11.2x4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	63.8	max width	11.2	retouch	
width(quarter)	11.2	thickness(quarter)	4	termination	
width(half)	10.3	thickness(half)	3.8	blade part	medial
width(3 quarter)	9.8	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19976
simple name	blade, unretouched	period	Old Kingdom	size	61.2x11.8x5.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	61.2	max width	11.8	retouch	
width(quarter)	10.9	thickness(quarter)	5.2	termination	
width(half)	11.8	thickness(half)	4.6	blade part	medial
width(3 quarter)	10	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19977
simple name	blade, unretouched	period	Old Kingdom	size	36.9x16x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	"3/---" marked in pencil.				

max length	36.9	max width	16	retouch	
width(quarter)	16	thickness(quarter)	3.3	termination	
width(half)	14.7	thickness(half)	3.3	blade part	medial
width(3 quarter)	15.1	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19978
simple name	blade, unretouched	period	Old Kingdom	size	39.9x10.7x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	39.9	max width	10.7	retouch	
width(quarter)	10.7	thickness(quarter)	2.4	termination	
width(half)	10.4	thickness(half)	2.5	blade part	medial
width(3 quarter)	7.2	thickness(3 quarter)	1.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19979
simple name	blade, unretouched	period	Old Kingdom	size	37.9x13.1x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	37.9	max width	12.4	retouch	
width(quarter)	13.1	thickness(quarter)	3	termination	
width(half)	13	thickness(half)	2.8	blade part	medial
width(3 quarter)	12.4	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19980

simple name	blade, unretouched	period	Old Kingdom	size	17x9.5x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description

max length	17	max width	9.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9.5	thickness(half)	2.7	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19981

simple name	blade, unretouched	period	Old Kingdom	size	22.2x7.4x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description

max length	22.2	max width	7.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	7.4	thickness(half)	2.2	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19982

simple name	blade, unretouched	period	Old Kingdom	size	38.5x13.8x5.7
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description

max length	38.5	max width	13.8	retouch	
width(quarter)	13.5	thickness(quarter)	4.2	termination	
width(half)	13.8	thickness(half)	5.7	blade part	medial
width(3 quarter)	13.2	thickness(3 quarter)	5.2	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19983
simple name	blade, unretouched	period	Old Kingdom	size	45.8x11.5x3.2
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	45.8	max width	11.5	retouch	
width(quarter)	11.2	thickness(quarter)	3.2	termination	
width(half)	11.5	thickness(half)	3.2	blade part	medial
width(3 quarter)	11.1	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19984
simple name	blade, unretouched	period	Old Kingdom	size	46.1x18.5x6.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	46.1	max width	18.5	retouch	
width(quarter)	18.5	thickness(quarter)	5	termination	
width(half)	13.4	thickness(half)	6.1	blade part	distal
width(3 quarter)	11.5	thickness(3 quarter)	5.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19985
simple name	blade, unretouched	period	Old Kingdom	size	58.5x11.3x5.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	58.5	max width	11.3	retouch	
width(quarter)	11	thickness(quarter)	3.1	termination	
width(half)	11.3	thickness(half)	3.3	blade part	distal
width(3 quarter)	10.9	thickness(3 quarter)	5.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19986
simple name	blade, unretouched	period	Old Kingdom	size	59.2x10.6x3.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	59.2	max width	9.9	retouch	
width(quarter)	9	thickness(quarter)	2.6	termination	
width(half)	9.9	thickness(half)	2.4	blade part	distal
width(3 quarter)	10.6	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19987
simple name	blade, unretouched	period	Old Kingdom	size	61.6x13x5.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	61.6	max width	13	retouch	
width(quarter)	11.9	thickness(quarter)	5.5	termination	
width(half)	13	thickness(half)	5.2	blade part	distal
width(3 quarter)	11	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19988
simple name	blade, unretouched	period	Old Kingdom	size	35.7x10.2x1.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	35.7	max width	10.2	retouch	
width(quarter)	10.2	thickness(quarter)	1.3	termination	
width(half)	9	thickness(half)	1.2	blade part	distal
width(3 quarter)	10.1	thickness(3 quarter)	1.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19989

simple name	blade, unretouched	period	Old Kingdom	size	68.6x14.2x4.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	68.6	max width	14.2	retouch	
width(quarter)	11.8	thickness(quarter)	3.8	termination	
width(half)	13	thickness(half)	4.5	blade part	distal
width(3 quarter)	14.2	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M6684A

simple name	core	period	Middle Kingdom	size	75.5x73.3x44
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie et al. 1923, 21, pl. 39.103				
description	Core? (heavily patinated).				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M6684C

simple name	core	period	Middle Kingdom	size	92.5x72.5x32.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie et al. 1923, 21, pl. 39				
description	? (heavily patinated) core.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38265(248)
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	23.5x10.2x3.5
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade with irregular retouch along one lateral edge.				
max length	23.5	max width	10.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.5	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M153C
simple name	knife, MK1	period	Middle Kingdom, 12th Dynasty	size	144.5x25x6.0
functional name		colour	mid grey/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Broken knife sharpened with point toward sharpener (assuming lower curve is the cutting edge) Top sharpened alternately. Exhibits negative 'Seitenbezogenheit'. Found in bowl.				
max length	145	max width	25	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M243
simple name	flake, unretouched	period	Middle Kingdom, 12th Dynasty	size	41.9x37.3x2.7
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Flake.				
max length	41.9	max width	37.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	2.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Riqqa	MUSEUM	Manchester	MUSEUM NO.	M5973A

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	80.2x17.6x3.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	tomb 124 cemetery	context	
date evidence					
references	Engelbach 1915, 12 mentions only a flint 'flake' from this burial, but cemetery A is said to be 12th Dynasty. All graves in A are said (Englebach 1915, 5) to be large. 124A is listed on plate XLI as containing a male skeleton.				
description	Blade from Englebach's 1912 excavation?				

max length	80.2	max width	17.7	retouch	
width(quarter)	15.7	thickness(quarter)	3.4	termination	
width(half)	12.5	thickness(half)	2.8	blade part	complete
width(3 quarter)	3.2	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Riqqa	MUSEUM	Manchester	MUSEUM NO.	M5973B

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	89.1x10.9x3.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	tomb 124 cemetery	context	
date evidence					
references					
description	Blade from Englebach's 1912 excavation?				

max length	89.1	max width	10.9	retouch	
width(quarter)	10.9	thickness(quarter)	3.5	termination	
width(half)	8.1	thickness(half)	2.5	blade part	complete
width(3 quarter)	3.2	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Riqqa	MUSEUM	Manchester	MUSEUM NO.	M5973C

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	87.5x13.6x3.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	tomb 124 cemetery	context	
date evidence					
references					
description	Blade from Englebach's 1912 excavation?				

max length	87.5	max width	13.6	retouch	
width(quarter)	11.1	thickness(quarter)	3.4	termination	
width(half)	10.3	thickness(half)	3	blade part	complete
width(3 quarter)	3.2	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073B(38024)

simple name	razor, square	period	Early Dynastic, 2nd Dynasty-Ol	size	61.6x28.2x7.5
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429' square ends.				

max length	61.6	max width	28.2	retouch	
width(quarter)	28.2	thickness(quarter)	7.5	termination	
width(half)	26.1	thickness(half)	7.3	blade part	medial
width(3 quarter)	23.1	thickness(3 quarter)	6.8	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073C(38025)

simple name	razor	period	Early Dynastic, 2nd Dynasty-Ol	size	57.4x22.8x8.5
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429' one round, one square end.				

max length	57.4	max width	24.8	retouch	rough alternate retouch or wear along on
width(quarter)	22.8	thickness(quarter)	7.8	termination	
width(half)	22.8	thickness(half)	8.5	blade part	medial
width(3 quarter)	24.8	thickness(3 quarter)	7.1	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073D(38026)

simple name	razor, square	period	Early Dynastic, 2nd Dynasty-Ol	size	55.5x26.6x7.1
functional name		colour	mid grey	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429' square end.				

max length	55.5	max width	27	retouch	
width(quarter)	26.6	thickness(quarter)	5.4	termination	
width(half)	25.3	thickness(half)	6.6	blade part	medial
width(3 quarter)	27	thickness(3 quarter)	7.1	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073E(38027)
simple name	razor, square	period	Early Dynastic, 2nd Dynasty-Ol	size	50.2x26.2x24.8
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429' square ends.				

max length	50.2	max width	26.2	retouch	
width(quarter)	26.1	thickness(quarter)	4.1	termination	
width(half)	26.2	thickness(half)	4.8	blade part	medial
width(3 quarter)	25.5	thickness(3 quarter)	4.7	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073F(38028)
simple name	razor, square	period	Early Dynastic, 2nd Dynasty-Ol	size	58.9x20.4x5.9
functional name		colour	light-mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429' square ends.				

max length	58.9	max width	20.4	retouch	
width(quarter)	20.4	thickness(quarter)	5.9	termination	
width(half)	19.5	thickness(half)	5	blade part	medial
width(3 quarter)	17.9	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073G(38029)
simple name	razor, square	period	Early Dynastic, 2nd Dynasty-Ol	size	50.6x17.7x8.6
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429' square ends. As this is narrower than the average razor blade it may be an intermediate type				

max length	50.6	max width	17.7	retouch	
width(quarter)	17.7	thickness(quarter)	8.6	termination	
width(half)	17.7	thickness(half)	7.6	blade part	medial
width(3 quarter)	14.2	thickness(3 quarter)	7.2	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073H(38030)

simple name	razor	period	Early Dynastic, 2nd Dynasty-Ol	size	70.3x24.5x6.7
functional name		colour	pink banded	shape	broad
excavation no		house/tomb		context	

date evidence

references

description: Marked '23/429' one round, one square end.

max length	70.3	max width	24.5	retouch	
width(quarter)	22.9	thickness(quarter)	4.7	termination	
width(half)	24.4	thickness(half)	6.3	blade part	medial
width(3 quarter)	24.5	thickness(3 quarter)	6.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(9)

simple name	blade, unretouched	period		size	47.9x19.8x3.9
functional name		colour	grey	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	47.9	max width	19.8	retouch	
width(quarter)	19.8	thickness(quarter)	4.2	termination	
width(half)	16.7	thickness(half)	3.9	blade part	distal
width(3 quarter)	13.7	thickness(3 quarter)	3.3	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(10)

simple name	blade, retouched	period		size	39.6x14.5x2.5
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	39.6	max width	14.5	retouch	ventral, right
width(quarter)	11.9	thickness(quarter)	2.4	termination	
width(half)	13.4	thickness(half)	2.5	blade part	distal
width(3 quarter)	14.5	thickness(3 quarter)	2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(11)

simple name	blade, unretouched	period		size	50.4x10.4x2.5
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	50.4	max width	10.4	retouch	
width(quarter)	10.4	thickness(quarter)	2.6	termination	
width(half)	8.6	thickness(half)	2.5	blade part	distal
width(3 quarter)	7.5	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(12)

simple name	blade, unretouched	period		size	26x12.8x3.6
functional name		colour	dark grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	26	max width	25.9	retouch	
width(quarter)	25.9	thickness(quarter)	3.5	termination	
width(half)	12.8	thickness(half)	3.6	blade part	medial
width(3 quarter)	11.2	thickness(3 quarter)	3.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(13)

simple name	blade, unretouched	period		size	41.8x17.7x3
functional name		colour	mid grey	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	41.8	max width	17.7	retouch	
width(quarter)	17.7	thickness(quarter)	2.8	termination	
width(half)	17	thickness(half)	3	blade part	medial
width(3 quarter)	15.9	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(14)

simple name	blade, unretouched	period		size	39.5x13.4x5
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	39.5	max width	13.4	retouch			
width(quarter)	13.4	thickness(quarter)	4.7			termination	
width(half)	13.4	thickness(half)	5			blade part	medial
width(3 quarter)	13	thickness(3 quarter)	5			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(15)

simple name	blade, serrated	period		size	38.1x13.1x3.6
functional name		colour	cream	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	38.1	max width	13.1	retouch	serrated ventral both		
width(quarter)	12.5	thickness(quarter)	3.6			termination	
width(half)	12.4	thickness(half)	3.6			blade part	medial
width(3 quarter)	13.1	thickness(3 quarter)	3.9			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(16)

simple name	blade, unretouched	period		size	31x14.2x4.2
functional name		colour	dark grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	31	max width	14.2	retouch			
width(quarter)	13.4	thickness(quarter)	4.2			termination	
width(half)	14.2	thickness(half)	4.2			blade part	medial
width(3 quarter)	13.5	thickness(3 quarter)	4.3			segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(17)

simple name	blade, unretouched	period		size	37.2x10.8x4.2
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	37.2	max width	10.8	retouch	
width(quarter)	9.8	thickness(quarter)	4.2	termination	
width(half)	10.8	thickness(half)	3.6	blade part	medial
width(3 quarter)	10.8	thickness(3 quarter)	3.4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(18)

simple name	blade, serrated	period		size	44.3x14.2x3.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	44.3	max width	14.2	retouch	serrated, ventral
width(quarter)	14.2	thickness(quarter)	3.5	termination	
width(half)	12.8	thickness(half)	3.5	blade part	medial
width(3 quarter)	12	thickness(3 quarter)	4.4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(19)

simple name	blade, unretouched	period		size	36x11.2x4.2
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	36	max width	11.2	retouch	
width(quarter)	10.7	thickness(quarter)	3.5	termination	
width(half)	11.2	thickness(half)	4.2	blade part	medial
width(3 quarter)	10.4	thickness(3 quarter)	3.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(20)

simple name	blade	period		size	46.1x13.1x4.2
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	46.1	max width	13.1	retouch	longditudunal break
width(quarter)	13.1	thickness(quarter)	4	termination	
width(half)	9.8	thickness(half)	4.2	blade part	medial
width(3 quarter)	8.6	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xvi(21)

simple name	blade, unretouched	period		size	20.5x6.6x2.5
functional name		colour	dark grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	20.5	max width	6.6	retouch	
width(quarter)	6.6	thickness(quarter)	3	termination	
width(half)	6.1	thickness(half)	2.5	blade part	medial
width(3 quarter)	6.5	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(1)

simple name	blade, retouched, lateral	period	Middle Kingdom	size	61.7x11.9x1.9
functional name	sickle	colour	pink brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Sickle blade with mastic				

max length	61.7	max width	11.9	retouch	serrations ventral right
width(quarter)	11.9	thickness(quarter)	2	termination	
width(half)	9.1	thickness(half)	1.9	blade part	
width(3 quarter)	7.8	thickness(3 quarter)	2.9	segmented/truncated	
wear	gloss dorsal left				

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(2)

simple name	blade, retouched, lateral	period		size	93.6x11.7x4.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	93.6	max width	11.7	retouch	serrations ventral right
width(quarter)	11.6	thickness(quarter)	4.2	termination	
width(half)	11.7	thickness(half)	4.2	blade part	
width(3 quarter)	11.7	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(3)

simple name	blade, retouched, lateral	period		size	70.1x13.9x3
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	70.1	max width	13.9	retouch	serrations ventral right
width(quarter)	13.9	thickness(quarter)	3.3	termination	
width(half)	13.4	thickness(half)	3	blade part	
width(3 quarter)	9.7	thickness(3 quarter)	2.7	segmented/truncated	

wear gloss ventral right and dorsal left

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(4)

simple name	blade, retouched, lateral	period		size	32.4x10x2.5
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	32.4	max width	10	retouch	serrations ventral right
width(quarter)	9.2	thickness(quarter)	3	termination	
width(half)	8.9	thickness(half)	2.5	blade part	medial
width(3 quarter)	10	thickness(3 quarter)	2.5	segmented/truncated	

wear gloss dorsal left

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(5)

simple name	blade, retouched, lateral	period		size	38.8x15.7x5.1
functional name	sickle	colour	orange brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	38.8	max width	15.7	retouch	?serrations ventral right
width(quarter)	14	thickness(quarter)	4	termination	
width(half)	15.7	thickness(half)	5.1	blade part	medial
width(3 quarter)	15.7	thickness(3 quarter)	3.8	segmented/truncated	

wear gloss ventral both

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(6)

simple name	blade, retouched, lateral	period		size	32.6x13.7x3.4
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	32.6	max width	12.7	retouch	serrations both
width(quarter)	13.7	thickness(quarter)	3	termination	
width(half)	12.7	thickness(half)	3.4	blade part	medial
width(3 quarter)	12.5	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(7)

simple name	blade, retouched, lateral	period		size	33x12.2x3.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	33	max width	12.2	retouch	serrations ventral
width(quarter)	12.2	thickness(quarter)	3.2	termination	
width(half)	11.6	thickness(half)	3.2	blade part	medial
width(3 quarter)	11.4	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(8)

simple name	blade, retouched, lateral	period		size	43.2x15.1x3.3
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Blade broken longtidunally giving a flat back.

max length	43.2	max width	15.1	retouch	serrations ventral		
width(quarter)	15.1	thickness(quarter)	3.3			termination	
width(half)	13.7	thickness(half)	3.3			blade part	medial
width(3 quarter)	13.3	thickness(3 quarter)	3.3			segmented/truncated	segmented

wear	gloss dorsal and ventral

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(9)

simple name	blade, retouched, lateral	period		size	32.3x17.1x3
functional name	sickle	colour	dark grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	32.3	max width	17.1	retouch	serrations dorsal and ventral		
width(quarter)	17.1	thickness(quarter)	3			termination	
width(half)	14.6	thickness(half)	3			blade part	medial
width(3 quarter)	15.5	thickness(3 quarter)	2.9			segmented/truncated	

wear	gloss dorsal

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527iii(10)

simple name	blade, serrated	period		size	28.7x16.8x7.5
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	End sickle marked SR.

max length	28.7	max width	16.8	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	7.5			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527viii(1)

simple name	blade, serrated	period		size	62.4x16.3x4.7
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K23.

max length	62.4	max width	16.3	retouch	serrations ventral both
width(quarter)	15.9	thickness(quarter)	4.6	termination	
width(half)	16.3	thickness(half)	4.7	blade part	proximal
width(3 quarter)	14.4	thickness(3 quarter)	4	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527viii(2)

simple name	blade, serrated	period		size	30x13.1x3.6
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K23.

max length	30	max width	13.1	retouch	serrations dorsal right
width(quarter)	11.7	thickness(quarter)	3.9	termination	
width(half)	12.6	thickness(half)	3.6	blade part	medial
width(3 quarter)	13.1	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527viii(3)

simple name	blade, serrated	period		size	25.5x10.4x2.5
functional name		colour	cream/brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K23.

max length	25.2	max width	10.4	retouch	serrations dorsal left
width(quarter)	9.9	thickness(quarter)	2.2	termination	
width(half)	10.4	thickness(half)	2.5	blade part	medial
width(3 quarter)	9.9	thickness(3 quarter)	2.6	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xiv(1)

simple name	blade	period		size	65.7x12.5x3.2
functional name		colour	mid pink brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K34.

max length	65.7	max width	12.5	retouch	
width(quarter)	12.5	thickness(quarter)	2.7	termination	
width(half)	12.2	thickness(half)	3.4	blade part	
width(3 quarter)	12.3	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xiv(2)

simple name	blade, retouched	period		size	67.7x18.4x4.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K33.

max length	67.7	max width	18.4	retouch	serrated dorasl right and distal left
width(quarter)	17.9	thickness(quarter)	5.2	termination	
width(half)	18.4	thickness(half)	4.9	blade part	distal
width(3 quarter)	15.4	thickness(3 quarter)	3.9	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527xiv(3)

simple name	blade	period		size	91.7x15.2x4.8
functional name		colour	orange brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description Blade marked K31.

max length	91.7	max width	15.2	retouch	
width(quarter)	13.3	thickness(quarter)	4.3	termination	
width(half)	15.2	thickness(half)	4.8	blade part	proximal
width(3 quarter)	13.5	thickness(3 quarter)	6.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7406
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	67.5x9.4x2.8
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Blade, serrated, previous hinge fracture. Find 51 Kahun 1889.				

max length	67.5	max width	9.4	retouch	serrated, ventral left
width(quarter)	9.2	thickness(quarter)	2.6	termination	
width(half)	9.4	thickness(half)	2.8	blade part	medial
width(3 quarter)	9	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7348
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	63.3x9.8x3.1
functional name	sickle	colour	pink brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sicke blade with ventral serrations and dorsal and ventral gloss. Museum register states 'Kahun scarificial 1887'				

max length	63.3	max width	9.8	retouch	serrations ventral left
width(quarter)	9.1	thickness(quarter)	2.3	termination	
width(half)	9.5	thickness(half)	3.1	blade part	distal
width(3 quarter)	9.8	thickness(3 quarter)	1	segmented/truncated	
wear	gloss dorsal left and and ventral right				

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527ix(1)
simple name	crested blade	period	Middle Kingdom, 12th Dynasty	size	68.7x14.2x6.9
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade marked K24.				

max length	68.7	max width	14.2	retouch	crested right
width(quarter)	14.1	thickness(quarter)	6	termination	
width(half)	14.2	thickness(half)	6.9	blade part	proximal
width(3 quarter)	13.7	thickness(3 quarter)	5.8	segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527ix(2)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	43.9x12.1x5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade marked K24.

max length	43.9	max width	12.8	retouch	serrations, ventral both
width(quarter)	12.8	thickness(quarter)	3.9	termination	
width(half)	12.1	thickness(half)	5	blade part	medial
width(3 quarter)	10.4	thickness(3 quarter)	4.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7527ii

simple name	borer	period	Middle Kingdom, 12th Dynasty	size	51.5x22.7x10.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade with wear striations.

max length	51.5	max width	22.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(1)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	49.7x17.4x5.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	49.7	max width	17.1	retouch	dorsal right and steep dorsal left
width(quarter)	17.1	thickness(quarter)	5.6	termination	
width(half)	17.4	thickness(half)	5.7	blade part	proximal
width(3 quarter)	16.4	thickness(3 quarter)	5.7	segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(2)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	90.7x12.2x3
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sickle blade with mastic.

max length	90.7	max width	12.2	retouch			
width(quarter)	12	thickness(quarter)	3.7			termination	
width(half)	11.7	thickness(half)	3			blade part	distal
width(3 quarter)	12.2	thickness(3 quarter)	3.4			segmented/truncated	segmented

wear	gloss dorsal and ventral

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(3)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	47.6x12.2x2.4
functional name	sickle	colour	light brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	47.6	max width	12.2	retouch	serration ventral right		
width(quarter)	12.2	thickness(quarter)	2.4			termination	
width(half)	12	thickness(half)	2.4			blade part	distal
width(3 quarter)	8.3	thickness(3 quarter)	2			segmented/truncated	segmented

wear	gloss dorsal left and ventral right

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(4)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	38.7x11x2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	38.7	max width	11	retouch	retouch ventral left		
width(quarter)	11	thickness(quarter)	2.1			termination	
width(half)	10	thickness(half)	2			blade part	distal
width(3 quarter)	9	thickness(3 quarter)	1.8			segmented/truncated	segmented

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(5)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	37.5x12.5x2.6
functional name		colour	grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	37.5	max width	12.5	retouch	serration ventral
width(quarter)	12.5	thickness(quarter)	2.4	termination	
width(half)	11.5	thickness(half)	2.6	blade part	medial
width(3 quarter)	11.5	thickness(3 quarter)	2.8	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(6)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	29.5x11.2x3.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	29.5	max width	11.2	retouch	serration, ventral
width(quarter)	10	thickness(quarter)	2.9	termination	
width(half)	10.6	thickness(half)	3.1	blade part	medial
width(3 quarter)	11.2	thickness(3 quarter)	3.4	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(7)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	39.6x13.3x4.7
functional name		colour	mid brown cream	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	39.6	max width	13.3	retouch	serration ventral
width(quarter)	13.3	thickness(quarter)	4.7	termination	
width(half)	12.3	thickness(half)	4.7	blade part	medial
width(3 quarter)	11.7	thickness(3 quarter)	4.6	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(8)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	31.2x13.4x2.7
functional name		colour	pink	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	31.2	max width	13.4	retouch	serration ventral, retouch dorsal
width(quarter)	12.2	thickness(quarter)	2.8	termination	
width(half)	13.2	thickness(half)	2.7	blade part	medial
width(3 quarter)	13.4	thickness(3 quarter)	2.7	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(9)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	47.7x11.8x3.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	47.7	max width	11.8	retouch	ventral, both
width(quarter)	11.1	thickness(quarter)	3.5	termination	
width(half)	11.4	thickness(half)	3.7	blade part	medial
width(3 quarter)	11.8	thickness(3 quarter)	3.7	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(10)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	51x13.5x3.1
functional name	sickle	colour	pink brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51	max width	14	retouch	serrations ventral one edge
width(quarter)	14	thickness(quarter)	3.2	termination	
width(half)	13.2	thickness(half)	3.1	blade part	medial
width(3 quarter)	13.5	thickness(3 quarter)	3.1	segmented/truncated	segmented
wear	gloss dorsal				

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(11)
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	40.4x13.4x3.4
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	40.4	max width	13.4	retouch	serrations ventral
width(quarter)	11.2	thickness(quarter)	3.3	termination	
width(half)	12.2	thickness(half)	3.4	blade part	medial
width(3 quarter)	13.4	thickness(3 quarter)	3.4	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(12)
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	47.2x13.3x3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	47.2	max width	13.3	retouch	serrations dorsal one edge
width(quarter)	13.3	thickness(quarter)	3.2	termination	
width(half)	12	thickness(half)	3	blade part	medial
width(3 quarter)	11.7	thickness(3 quarter)	3	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(13)
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	51.8x12.8x4.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51.8	max width	12.8	retouch	serrations ventral one edge
width(quarter)	12.4	thickness(quarter)	4.5	termination	
width(half)	12.8	thickness(half)	4.1	blade part	medial
width(3 quarter)	11.6	thickness(3 quarter)	4.3	segmented/truncated	segmented
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(14)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	52.8x14.3x2.8
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	52.8	max width	14.3	retouch	serrations ventral one edge
width(quarter)	14.3	thickness(quarter)	3	termination	
width(half)	13.6	thickness(half)	2.8	blade part	medial
width(3 quarter)	13	thickness(3 quarter)	2.9	segmented/truncated	segmented

wear gloss dorsal

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(15)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	40.9x14x3.7
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	40.9	max width	14	retouch	serrations ventral right, steep retouch do
width(quarter)	13	thickness(quarter)	3.4	termination	
width(half)	14	thickness(half)	3.7	blade part	medial
width(3 quarter)	12.7	thickness(3 quarter)	3.4	segmented/truncated	segmented

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(16)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	45.2x14x5.2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	45.2	max width	14	retouch	serrations dorsal and ventral
width(quarter)	14	thickness(quarter)	4.6	termination	
width(half)	13.6	thickness(half)	4.9	blade part	medial
width(3 quarter)	13.5	thickness(3 quarter)	5.2	segmented/truncated	segmented

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(17)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	36.8x13x3.5
functional name	sickle	colour	orange brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	36.8	max width	12.8	retouch	serration, ventral both		
width(quarter)	12	thickness(quarter)	3.5			termination	
width(half)	13	thickness(half)	3.5			blade part	medial
width(3 quarter)	12.8	thickness(3 quarter)	3.3			segmented/truncated	segmented
wear	gloss ventral and dorsal both sides						

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(18)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	47x13.4x3.3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	47	max width	13.4	retouch	dorsal serrations and steep retouch		
width(quarter)	13.4	thickness(quarter)	5.3			termination	
width(half)	11.5	thickness(half)	3.9			blade part	medial
width(3 quarter)	9.2	thickness(3 quarter)	3.3			segmented/truncated	segmented
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7576(19)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	28.6x11.6x3.3
functional name		colour	grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	28.6	max width	10.9	retouch	serrations ventral		
width(quarter)	10.3	thickness(quarter)	3.4			termination	
width(half)	11.6	thickness(half)	3.3			blade part	medial
width(3 quarter)	10.9	thickness(3 quarter)	3.1			segmented/truncated	segmented
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7577

simple name	bifacial	period	Middle Kingdom, 12th Dynasty	size	73x33.8x9.6
functional name		colour	orange brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Bifacial blade marked 'N heap'.

max length	73	max width	33.8	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	9.6			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC16737

simple name	blade, unretouched	period	New Kingdom, Dynasty 18?	size	55.3x13.9x4.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	55.3	max width	13.9	retouch			
width(quarter)	13.9	thickness(quarter)	4.5			termination	
width(half)	10.4	thickness(half)	4.7			blade part	distal
width(3 quarter)	9.5	thickness(3 quarter)	4			segmented/truncated	

wear	

PLACE	?	MUSEUM	Petrie	MUSEUM NO.	UC30141

simple name	rough flint	period	Middle Kingdom, 12th Dynasty	size	62.5x25.8x6.5
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Rough flint.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Petrie	MUSEUM NO.	UC399

simple name	tabular flint	period	New Kingdom, 18th Dynasty			size	
functional name			colour			shape	
excavation no			house/tomb			context	Central City, du

date evidence	
references	
description	Tabular flint, possibly not worked. Petrie Museum register reads 'Petrie 1891-2 Late 18D' So probably from the Central City heap mentioned in Spurrell1894.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Petrie	MUSEUM NO.	UC144

simple name	flake, core rejuvenation	period	New Kingdom			size	34.7x22.5x10.7
functional name			colour	mid brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Flint flake possibly a core rejuvenation flake. Museum entry book reads 'Petrie 1891'.

max length	34.7	max width	22.5	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	10.7			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Petrie	MUSEUM NO.	UC146

simple name	flake	period	New Kingdom, 19th Dynasty			size	38.7x37.5x16.3
functional name			colour	mid brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Flint flake with steep retouch. Petrie Museum register reads 'Petrie 1891, Late 19th Dynasty'.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19871
simple name	crested blade	period	Old Kingdom	size	27.7x9.2x3.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description	Core rejuvenation blade.				
max length	27.7	max width	9.2	retouch	
width(quarter)	8.8	thickness(quarter)	3.1	termination	
width(half)	9.2	thickness(half)	3.4	blade part	medial
width(3 quarter)	8	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19872
simple name	blade, unretouched	period	Old Kingdom	size	27.4x8.9x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	27.4	max width	8.9	retouch	
width(quarter)	8.9	thickness(quarter)	3.3	termination	
width(half)	8.8	thickness(half)	3.2	blade part	distal
width(3 quarter)	7.9	thickness(3 quarter)	2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19873
simple name	blade, unretouched	period	Old Kingdom	size	28.8x10.9x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	28.8	max width	10.9	retouch	dorsal trample or retouch one side
width(quarter)	10.5	thickness(quarter)	2.8	termination	
width(half)	10.9	thickness(half)	2.9	blade part	medial
width(3 quarter)	10.6	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19874
simple name	blade, unretouched	period	Old Kingdom	size	16.8x9.5x1.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	16.8	max width	9.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9.5	thickness(half)	1.9	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19875
simple name	blade, unretouched	period	Old Kingdom	size	20.7x7.2x1.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	20.7	max width	7.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	7.2	thickness(half)	1.5	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19876
simple name	blade, unretouched	period	Old Kingdom	size	30.7x9.8x1.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	30.7	max width	9.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9.8	thickness(half)	1.8	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19877

simple name	blade, unretouched	period	Old Kingdom	size	23.8x7.8x1.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	23.8	max width	7.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	7.8	thickness(half)	1.6	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19878

simple name	blade, unretouched	period	Old Kingdom	size	21x10.2x1.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	21	max width	10.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	10.2	thickness(half)	1.9	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19879

simple name	blade, unretouched	period	Old Kingdom	size	29.5x9.5x1.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	29.5	max width	9.5	retouch	
width(quarter)	9.5	thickness(quarter)	1.6	termination	
width(half)	9.5	thickness(half)	1.5	blade part	medial
width(3 quarter)	9.2	thickness(3 quarter)	1.6	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19880
simple name	blade, unretouched	period	Old Kingdom	size	25.3x9.8x2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	25.3	max width	9.8	retouch	trample or retouch right and left
width(quarter)		thickness(quarter)		termination	
width(half)	9.8	thickness(half)	2	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19881
simple name	blade, unretouched	period	Old Kingdom	size	18.5x6.8x1.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	18.5	max width	6.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	6.8	thickness(half)	1.6	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19882
simple name	blade, unretouched	period	Old Kingdom	size	17x7.2x3.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	17	max width	7.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	7.2	thickness(half)	3.5	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19883

simple name	blade, unretouched	period	Old Kingdom	size	10.8x11.9x1.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	10.8	max width	11.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	11.9	thickness(half)	1.3	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19884

simple name	blade, unretouched	period	Old Kingdom	size	57.3x9.1x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	57.3	max width	9.1	retouch	
width(quarter)	9	thickness(quarter)	3.6	termination	
width(half)	9.1	thickness(half)	4.2	blade part	distal
width(3 quarter)	7.8	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19885

simple name	blade, retouched, lateral	period	Old Kingdom	size	57.9x14.4x6.1
functional name		colour	mid-dark brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description	Retouched ventral right and left.				

max length	57.9	max width	14.4	retouch	retouch ventral right and left
width(quarter)	11.8	thickness(quarter)	5	termination	
width(half)	14.4	thickness(half)	6	blade part	proximal
width(3 quarter)	12.2	thickness(3 quarter)	6.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19886

simple name	blade, unretouched	period	Old Kingdom	size	25.7x9.5x1.9
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	25.7	max width	9.5	retouch	
width(quarter)	9.5	thickness(quarter)		termination	
width(half)		thickness(half)	1.9	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19887

simple name	blade, unretouched	period	Old Kingdom	size	31.5x10.2x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description	Lipped.				

max length	31.5	max width	10.2	retouch	
width(quarter)	10	thickness(quarter)	2	termination	
width(half)	10.2	thickness(half)	2.5	blade part	proximal
width(3 quarter)	10.2	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19888

simple name	blade, unretouched	period	Old Kingdom	size	60.5x14.9x4.1
functional name		colour	light brown/grey	shape	broad
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	60.5	max width	14.9	retouch	
width(quarter)	14.1	thickness(quarter)	3.3	termination	
width(half)	14.9	thickness(half)	3.8	blade part	complete
width(3 quarter)	13.4	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19889

simple name	blade, unretouched	period	Old Kingdom	size	24.4x9x3.2
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	24.4	max width	9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9	thickness(half)	3.2	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19846

simple name	blade, unretouched	period	Old Kingdom	size	65x14.4x4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	65	max width	14.4	retouch	
width(quarter)	13	thickness(quarter)	4	termination	
width(half)	14.4	thickness(half)	3.5	blade part	complete
width(3 quarter)	13.7	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19847

simple name	blade, unretouched	period	Old Kingdom	size	59.8x8.5x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	59.8	max width	9.7	retouch	
width(quarter)	9.7	thickness(quarter)	2.5	termination	
width(half)	8.5	thickness(half)	2.5	blade part	medial
width(3 quarter)	7	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19848
simple name	blade, unretouched	period	Old Kingdom	size	38.8x10.5x3.2
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	38.8	max width	10.5	retouch	
width(quarter)	10.5	thickness(quarter)	3.2	termination	
width(half)	10.2	thickness(half)	2.6	blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	2.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19849
simple name	blade, unretouched	period	Old Kingdom	size	22.2x9x2.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	22.2	max width	9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9	thickness(half)	2.3	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19850
simple name	blade, unretouched	period	Old Kingdom	size	32.8x8.5x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	32.8	max width	8.5	retouch	
width(quarter)	8.5	thickness(quarter)	1.9	termination	
width(half)	8.5	thickness(half)	2.1	blade part	proximal
width(3 quarter)	8	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19851

simple name	blade, unretouched	period	Old Kingdom	size	26x14.7x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	26	max width	14.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	14.7	thickness(half)	2.5	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19852

simple name	blade, retouched, lateral	period	Old Kingdom	size	30x10.5x2.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	30	max width	9	retouch	ventral retouch right, dorsal retouch right
width(quarter)	9	thickness(quarter)	2.4	termination	
width(half)	10.5	thickness(half)	2.3	blade part	proximal
width(3 quarter)	10.3	thickness(3 quarter)	2.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19853

simple name	blade, unretouched	period	Old Kingdom	size	58.5x12.9x3.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description	Previous hinge fracture.				

max length	58.5	max width	10.6	retouch	
width(quarter)	10.6	thickness(quarter)	2.8	termination	
width(half)	12.9	thickness(half)	3.2	blade part	proximal
width(3 quarter)	10.6	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19854

simple name	blade, unretouched	period	Old Kingdom	size	37x11.2x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	37	max width	11.2	retouch			
width(quarter)	11.2	thickness(quarter)	3.3			termination	
width(half)	9.5	thickness(half)	2.9			blade part	proximal
width(3 quarter)	8.2	thickness(3 quarter)	2.7			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19855

simple name	blade, unretouched	period	Old Kingdom	size	49.4x15.9x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	Lipped.

max length	49.4	max width	15.9	retouch			
width(quarter)	15.9	thickness(quarter)	3.9			termination	
width(half)	15	thickness(half)	3.6			blade part	proximal
width(3 quarter)	13.9	thickness(3 quarter)	3			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19856

simple name	blade, unretouched	period	Old Kingdom	size	29.1x8x2.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	29.1	max width	8	retouch			
width(quarter)	8	thickness(quarter)	2.6			termination	
width(half)	8	thickness(half)	2.1			blade part	proximal
width(3 quarter)	7.8	thickness(3 quarter)	2			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19857

simple name	blade, unretouched	period	Old Kingdom	size	65.7x11.9x5.4
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	65.7	max width	13	retouch	
width(quarter)	13	thickness(quarter)	5.4	termination	
width(half)	11.9	thickness(half)	4.3	blade part	proximal
width(3 quarter)	8	thickness(3 quarter)	3.2	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19858

simple name	blade, unretouched	period	Old Kingdom	size	32.4x10.5x2.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	32.4	max width	10	retouch	
width(quarter)	10	thickness(quarter)	2.5	termination	
width(half)	10	thickness(half)	2.6	blade part	proximal
width(3 quarter)	10.5	thickness(3 quarter)	3.1	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19859

simple name	blade, unretouched	period	Old Kingdom	size	20.2x10.1x1.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	20.2	max width	10.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	10.1	thickness(half)	1.8	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19860
simple name	blade, unretouched	period	Old Kingdom	size	68.6x9x3.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	68.6	max width	9	retouch	
width(quarter)	9	thickness(quarter)	3	termination	
width(half)	7.2	thickness(half)	2.9	blade part	proximal
width(3 quarter)	7	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19861
simple name	blade, unretouched	period	Old Kingdom	size	51.8x13.1x5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	51.8	max width	13.1	retouch	trample or retouch dorsal right and left
width(quarter)	13.1	thickness(quarter)	5	termination	
width(half)	11.4	thickness(half)	4.2	blade part	proximal
width(3 quarter)	9.9	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19862
simple name	blade, unretouched	period	Old Kingdom	size	16.8x11.8x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	16.8	max width	11.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	11.8	thickness(half)	3	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19863
simple name	blade, unretouched	period	Old Kingdom	size	32.9x11x3.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	32.9	max width	11	retouch	
width(quarter)	11	thickness(quarter)	3	termination	
width(half)	10.8	thickness(half)	3.6	blade part	distal
width(3 quarter)	10.6	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19864
simple name	blade, unretouched	period	Old Kingdom	size	43.9x8.9x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	43.9	max width	8.9	retouch	
width(quarter)	7.9	thickness(quarter)	1.8	termination	
width(half)	8.9	thickness(half)	2.2	blade part	proximal
width(3 quarter)	8.6	thickness(3 quarter)	1.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19865
simple name	blade, unretouched	period	Old Kingdom	size	31x7.9x1.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					
max length	31	max width	7.9	retouch	
width(quarter)	7.9	thickness(quarter)	2	termination	
width(half)	7	thickness(half)	1.8	blade part	d?
width(3 quarter)	6.6	thickness(3 quarter)	1.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19866

simple name	blade, unretouched	period	Old Kingdom	size	31x9x1.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	31	max width	9	retouch	
width(quarter)	9	thickness(quarter)	1.8	termination	
width(half)	9	thickness(half)	1.7	blade part	proximal
width(3 quarter)	8.8	thickness(3 quarter)	1.5	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19867

simple name	blade, unretouched	period	Old Kingdom	size	38.9x9.5x4.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	38.9	max width	9.7	retouch	
width(quarter)	9.5	thickness(quarter)	3.8	termination	
width(half)	8.7	thickness(half)	3.7	blade part	medial
width(3 quarter)	9.7	thickness(3 quarter)	4.1	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19868

simple name	blade, unretouched	period	Old Kingdom	size	28.6x9.5x1.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-1 catalogue number 164
description	

max length	28.6	max width	9.5	retouch	
width(quarter)	2	thickness(quarter)	1.7	termination	
width(half)	9.5	thickness(half)	1.5	blade part	medial
width(3 quarter)	8.5	thickness(3 quarter)	1.7	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19869

simple name	blade, unretouched	period	Old Kingdom	size	38.3x10.5x2.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	38.3	max width	10.5	retouch	
width(quarter)	9.7	thickness(quarter)	2.2	termination	
width(half)	9.8	thickness(half)	2.9	blade part	medial
width(3 quarter)	10.5	thickness(3 quarter)	2.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19870

simple name	blade, unretouched	period	Old Kingdom	size	22.2x7.5x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-1 catalogue number 164				
description					

max length	22.2	max width	7.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	distal
width(3 quarter)	7.5	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19810

simple name	blade, unretouched	period	Old Kingdom	size	34.2x10.1x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	34.2	max width	10.1	retouch	
width(quarter)	10.1	thickness(quarter)	3.3	termination	
width(half)	9.9	thickness(half)	2.6	blade part	proximal
width(3 quarter)	9.9	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19811
simple name	blade, unretouched	period	Old Kingdom	size	44.4x12.4x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	44.4	max width	12.4	retouch	
width(quarter)	12.2	thickness(quarter)	3	termination	
width(half)	12.4	thickness(half)	3	blade part	proximal
width(3 quarter)	11.1	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19812
simple name	crested blade	period	Old Kingdom	size	60.9x12.9x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	60.9	max width	12.9	retouch	
width(quarter)	11.2	thickness(quarter)	3.9	termination	
width(half)	12.2	thickness(half)	4.2	blade part	complete
width(3 quarter)	12.9	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19813
simple name	blade, unretouched	period	Old Kingdom	size	46.5x12x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	46.5	max width	11.2	retouch	
width(quarter)	12	thickness(quarter)	2.4	termination	
width(half)	11.2	thickness(half)	2.5	blade part	proximal
width(3 quarter)	9.9	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19814
simple name	crested blade	period	Old Kingdom	size	11.9x12.1x5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	69.6	max width	12.1	retouch	
width(quarter)	11.9	thickness(quarter)	3	termination	
width(half)	12.1	thickness(half)	5	blade part	distal
width(3 quarter)	8.3	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19815
simple name	blade, unretouched	period	Old Kingdom	size	45.3x12.2x3.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	45.3	max width	12.2	retouch	
width(quarter)	11.5	thickness(quarter)	3.5	termination	
width(half)	11.5	thickness(half)	3.4	blade part	proximal
width(3 quarter)	12.2	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19816
simple name	blade, unretouched	period	Old Kingdom	size	41.8x10x4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	41.8	max width	10	retouch	
width(quarter)	10	thickness(quarter)	4.2	termination	
width(half)	9.2	thickness(half)	3.6	blade part	distal
width(3 quarter)	8.1	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19817
simple name	blade, unretouched	period	Old Kingdom	size	28x5.2x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	28	max width	5.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	5.2	thickness(half)	3	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19818
simple name	blade, unretouched	period	Old Kingdom	size	23.5x8.4x4.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	23.5	max width	8.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	8.4	thickness(half)	4.3	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19819
simple name	blade, unretouched	period	Old Kingdom	size	31.3x9.4x2.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	31.1	max width	9.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9.4	thickness(half)	2.8	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19820
simple name	blade, unretouched	period	Old Kingdom	size	30x10.3x2.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	30	max width	10.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	10.3	thickness(half)	2.8	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19821
simple name	blade, unretouched	period	Old Kingdom	size	44.4x10x3.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	44.4	max width	7.8	retouch	
width(quarter)	10	thickness(quarter)	2.6	termination	
width(half)	8.9	thickness(half)	3.1	blade part	medial
width(3 quarter)	7.8	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19822
simple name	blade, unretouched	period	Old Kingdom	size	17.6x8.4x1.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	17.6	max width	8.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	8.4	thickness(half)	1.2	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19823

simple name	blade, retouched, lateral	period	Old Kingdom	size	16.3x13.7x3.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	16.3	max width	13.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	13.7	thickness(half)	3.8	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19824

simple name	blade, unretouched	period	Old Kingdom	size	23.2x8x2.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	23.2	max width	8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	8	thickness(half)	2.3	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19825

simple name	blade, unretouched	period	Old Kingdom	size	28.1x11.8x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	28.1	max width	11.1	retouch	
width(quarter)	11.8	thickness(quarter)	2.7	termination	
width(half)	11.1	thickness(half)	2.7	blade part	medial
width(3 quarter)	10	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19826

simple name	blade, retouched, lateral	period	Old Kingdom	size	22.4x10.5x3.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	22.4	max width	10.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	10.5	thickness(half)	3.5	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19827

simple name	blade, retouched, lateral	period	Old Kingdom	size	38.2x10.5x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	38.8	max width	10.5	retouch	
width(quarter)	10.5	thickness(quarter)	2.6	termination	
width(half)	10	thickness(half)	2.7	blade part	medial
width(3 quarter)	9.5	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19828

simple name	blade, unretouched	period	Old Kingdom	size	30.5x15.2x4.1
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	30.5	max width	15.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	15.2	thickness(half)	4.1	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19829
simple name	blade, retouched, lateral	period	Old Kingdom	size	30x11.3x1.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	30	max width	11.3	retouch	
width(quarter)	11.3	thickness(quarter)		termination	
width(half)		thickness(half)	1.9	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19830
simple name	blade, unretouched	period	Old Kingdom	size	19x8.6x2.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	19	max width	8.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	8.6	thickness(half)	2.8	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19831
simple name	blade, unretouched	period	Old Kingdom	size	24.8x11.3x4.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	24.8	max width	11.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	11.3	thickness(half)	4.1	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19832

simple name	blade, unretouched	period	Old Kingdom	size	27.5x8.2x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	27.5	max width	8.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	8.2	thickness(half)	2.2	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19833

simple name	blade, unretouched	period	Old Kingdom	size	15.9x9.7x1.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	15.9	max width	9.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9.7	thickness(half)	1.3	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19844

simple name	blade, unretouched	period	Old Kingdom	size	69.6x16x5.3
functional name		colour	dark brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	69.6	max width	16	retouch	
width(quarter)	16	thickness(quarter)	4.3	termination	
width(half)	15.7	thickness(half)	5.3	blade part	complete
width(3 quarter)	12.6	thickness(3 quarter)	5	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19845

simple name	blade, unretouched	period	Old Kingdom	size	33.8x9.2x3.5
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	33.8	max width	9.2	retouch	
width(quarter)	9.2	thickness(quarter)	3	termination	
width(half)	9.2	thickness(half)	3.5	blade part	proximal
width(3 quarter)	8.9	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19790

simple name	blade, retouched, lateral	period	Old Kingdom	size	67.8x14.5x3.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	67.8	max width	14.5	retouch	irregular retouch right and left
width(quarter)	11.4	thickness(quarter)	2.4	termination	
width(half)	14.5	thickness(half)	3.5	blade part	complete
width(3 quarter)	13.4	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19791

simple name	blade, retouched	period	Old Kingdom	size	73.5x14.6x2.6
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	73.5	max width	14.6	retouch	
width(quarter)	14.6	thickness(quarter)	2.6	termination	
width(half)	14.1	thickness(half)	2.4	blade part	complete
width(3 quarter)	11	thickness(3 quarter)	2.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19792
simple name	blade, unretouched	period	Old Kingdom	size	84.2x12.6x4.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description	Previous hinge fracture.				

max length	84.2	max width	12.6	retouch	
width(quarter)	12.6	thickness(quarter)	4	termination	
width(half)	11.9	thickness(half)	4.2	blade part	complete
width(3 quarter)	11	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19793
simple name	blade, unretouched	period	Old Kingdom	size	81.1x12.3x5.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	81.1	max width	12.3	retouch	
width(quarter)	11.3	thickness(quarter)	4	termination	
width(half)	12.3	thickness(half)	4.5	blade part	complete
width(3 quarter)	10.3	thickness(3 quarter)	5.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19794
simple name	blade, unretouched	period	Old Kingdom	size	42.4x12.1x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	42.4	max width	12.1	retouch	
width(quarter)	12.1	thickness(quarter)	3.3	termination	
width(half)	11.1	thickness(half)	3.2	blade part	proximal
width(3 quarter)	11	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19795

simple name	blade, unretouched	period	Old Kingdom	size	46.7x10.1x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	46.7	max width	10.1	retouch	
width(quarter)	10.1	thickness(quarter)	2.2	termination	
width(half)	8.9	thickness(half)	2.1	blade part	proximal
width(3 quarter)	9	thickness(3 quarter)	2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19796

simple name	blade, unretouched	period	Old Kingdom	size	25x11.7x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	25	max width	11.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	11.7	thickness(half)	2.5	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19797

simple name	blade, unretouched	period	Old Kingdom	size	62.5x10x3.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					

max length	62.5	max width	10	retouch	
width(quarter)	10	thickness(quarter)	3.5	termination	
width(half)	9.5	thickness(half)	3.6	blade part	proximal
width(3 quarter)	9.5	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19798

simple name	blade, unretouched	period	Old Kingdom	size	56.4x11.2x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: A 6-2 catalogue number 165

description

max length	56.4	max width	11.2	retouch	
width(quarter)	11.1	thickness(quarter)	2.2	termination	
width(half)	11.2	thickness(half)	2.4	blade part	proximal
width(3 quarter)	10.7	thickness(3 quarter)	2.5	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19799

simple name	blade, unretouched	period	Old Kingdom	size	25.6x10.5x5.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: A 6-2 catalogue number 165

description

max length	25.6	max width	10.5	retouch	
width(quarter)	10.5	thickness(quarter)		termination	
width(half)		thickness(half)	5.8	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19800

simple name	blade, unretouched	period	Old Kingdom	size	47.3x10.2x3.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: A 6-2 catalogue number 165

description

max length	47.3	max width	10.2	retouch	
width(quarter)	9.6	thickness(quarter)	3.5	termination	
width(half)	10	thickness(half)	3.1	blade part	proximal
width(3 quarter)	10.2	thickness(3 quarter)	3	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19801

simple name	blade, unretouched	period	Old Kingdom			size	52.2x15.6x2.5
functional name			colour	light brown/grey		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	52.2	max width	15.6	retouch	retouch or trample dorsal right and left		
width(quarter)	15.6	thickness(quarter)	2.5			termination	
width(half)	11.7	thickness(half)	2.4			blade part	proximal
width(3 quarter)	8.6	thickness(3 quarter)	2.1			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19802

simple name	blade, unretouched	period	Old Kingdom			size	24.3x14.1x4
functional name			colour	light brown/grey		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	24.3	max width	14.1	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)	14.1	thickness(half)	4			blade part	proximal
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19803

simple name	blade, unretouched	period	Old Kingdom			size	42.2x10.6x2.9
functional name			colour	light brown/grey		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	42.2	max width	10.6	retouch			
width(quarter)	10.6	thickness(quarter)	2.9			termination	
width(half)	9.2	thickness(half)	2.8			blade part	proximal
width(3 quarter)	9	thickness(3 quarter)	2.6			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19804

simple name	blade, unretouched	period	Old Kingdom	size	56.8x10x3.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	56.8	max width	10	retouch	
width(quarter)	9.2	thickness(quarter)	3.4	termination	
width(half)	10	thickness(half)	2.8	blade part	proximal
width(3 quarter)	9	thickness(3 quarter)	2.4	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19805

simple name	blade, unretouched	period	Old Kingdom	size	54.1x9.8x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-2 catalogue number 165
description	

max length	54.1	max width	9.8	retouch	
width(quarter)	9.8	thickness(quarter)	2	termination	
width(half)	9.5	thickness(half)	2.3	blade part	proximal
width(3 quarter)	8.9	thickness(3 quarter)	2.5	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19806

simple name	blade, unretouched	period	Old Kingdom	size	57.1x10x3.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	A 6-2 catalogue number 165
description	Lipped (slight).

max length	57.1	max width	10	retouch	
width(quarter)	10	thickness(quarter)	2.8	termination	
width(half)	9.6	thickness(half)	3.7	blade part	proximal
width(3 quarter)	9.2	thickness(3 quarter)	3	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19807
simple name	blade, unretouched	period	Old Kingdom	size	71.8x7.6x2.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	71.8	max width	7.6	retouch	
width(quarter)	7.6	thickness(quarter)	2.2	termination	
width(half)	7.6	thickness(half)	2.6	blade part	proximal
width(3 quarter)	7.4	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19808
simple name	blade, unretouched	period	Old Kingdom	size	24.6x10.2x1.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	24.6	max width	10.2	retouch	
width(quarter)	10.2	thickness(quarter)		termination	
width(half)		thickness(half)	1.8	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19809
simple name	blade, unretouched	period	Old Kingdom	size	32.6x10.6x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-2 catalogue number 165				
description					
max length	32.6	max width	10.6	retouch	
width(quarter)	10.6	thickness(quarter)		termination	
width(half)		thickness(half)	2.7	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19774
simple name	blade, unretouched	period	Old Kingdom	size	89.4x12.6x5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					
max length	89.4	max width	12.6	retouch	
width(quarter)	11.7	thickness(quarter)	4.3	termination	
width(half)	12.6	thickness(half)	5	blade part	complete
width(3 quarter)	10.5	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19775
simple name	blade, retouched, lateral	period	Old Kingdom	size	43.5x16.9x4.3
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					
max length	43.5	max width	16.9	retouch	one end has steep retouch, other end br
width(quarter)	15.9	thickness(quarter)	4.2	termination	
width(half)	16.3	thickness(half)	4.2	blade part	medial
width(3 quarter)	16.9	thickness(3 quarter)	4.3	segmented/truncated	seg + trunc
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19776
simple name	blade, unretouched	period	Old Kingdom	size	40.8x7.9x2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					
max length	40.5	max width	7.9	retouch	
width(quarter)	7.9	thickness(quarter)	2	termination	
width(half)	6.6	thickness(half)	2	blade part	distal
width(3 quarter)	4.2	thickness(3 quarter)	1.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19777
simple name	blade, unretouched	period	Old Kingdom	size	41.8x8x1.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	41.8	max width	8.1	retouch	
width(quarter)	8.1	thickness(quarter)	1.7	termination	
width(half)	8	thickness(half)	1.7	blade part	medial
width(3 quarter)	7	thickness(3 quarter)	1.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19778
simple name	blade, unretouched	period	Old Kingdom	size	47.416.5x2.9
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	47.4	max width	16.5	retouch	retouch or trample dorsal right and left
width(quarter)	16.5	thickness(quarter)	2.9	termination	
width(half)	14.3	thickness(half)	2.8	blade part	proximal
width(3 quarter)	10.3	thickness(3 quarter)	1.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19780
simple name	blade, retouched, lateral	period	Old Kingdom	size	43.1x9x4.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	43.1	max width	8.8	retouch	ventral retouch right and left
width(quarter)	7.9	thickness(quarter)	3.8	termination	
width(half)	8.8	thickness(half)	4.3	blade part	medial
width(3 quarter)	9	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19781

simple name	blade, unretouched	period	Old Kingdom	size	75x13.2x5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	75	max width	13.2	retouch	irregular retouch dorsal right
width(quarter)	13.2	thickness(quarter)	4.4	termination	
width(half)	11.8	thickness(half)	4.5	blade part	proximal
width(3 quarter)	11.3	thickness(3 quarter)	5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19779

simple name	blade, retouched, lateral	period	Old Kingdom	size	64.1x10x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	64.1	max width	10	retouch	
width(quarter)	10	thickness(quarter)	2.5	termination	
width(half)	8.7	thickness(half)	2.5	blade part	proximal
width(3 quarter)	8	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19782

simple name	blade, retouched, lateral	period	Old Kingdom	size	53.6x8x2.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	53.6	max width	8	retouch	
width(quarter)	7.8	thickness(quarter)	2.6	termination	
width(half)	8	thickness(half)	2.6	blade part	proximal
width(3 quarter)	8	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19783
simple name	blade, retouched, lateral	period	Old Kingdom	size	59.3x15x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	59.3	max width	13.5	retouch	
width(quarter)	13.5	thickness(quarter)	4.2	termination	
width(half)	15	thickness(half)	3.4	blade part	proximal
width(3 quarter)	12	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19784
simple name	blade, unretouched	period	Old Kingdom	size	62.2x13.5x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	62.2	max width	13.5	retouch	
width(quarter)	13.5	thickness(quarter)	3	termination	
width(half)	13	thickness(half)	2.6	blade part	proximal
width(3 quarter)	9.5	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19785
simple name	blade, unretouched	period	Old Kingdom	size	65x13x5.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description	Old hinge fracture.				

max length	65	max width	13	retouch	
width(quarter)	13	thickness(quarter)	4.8	termination	
width(half)	11.8	thickness(half)	5.4	blade part	proximal
width(3 quarter)	12.8	thickness(3 quarter)	5.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19786
simple name	blade, unretouched	period	Old Kingdom	size	45.4x17.2x3.9
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	45.4	max width	17.2	retouch	retouch or trample ventral right
width(quarter)	15	thickness(quarter)	3.9	termination	
width(half)	16.1	thickness(half)	3.9	blade part	proximal
width(3 quarter)	17.2	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19787
simple name	blade, unretouched	period	Old Kingdom	size	56.2x13.9x3.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	56.2	max width	13.9	retouch	
width(quarter)	12.2	thickness(quarter)	2.8	termination	
width(half)	12.9	thickness(half)	3.3	blade part	proximal
width(3 quarter)	13.9	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19788
simple name	blade, unretouched	period	Old Kingdom	size	64.6x11.4x4.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	64.6	max width	11.4	retouch	
width(quarter)	8.3	thickness(quarter)	4.9	termination	
width(half)	9.9	thickness(half)	3.9	blade part	medial
width(3 quarter)	11.4	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19789

simple name	blade, unretouched	period	Old Kingdom	size	41.9x11x3.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	A 6-44 catalogue number 282				
description					

max length	41.9	max width	11	retouch	
width(quarter)	11	thickness(quarter)	3.7	termination	
width(half)	10.1	thickness(half)	3.3	blade part	distal
width(3 quarter)	8	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19890

simple name	knife, broken	period	Old Kingdom	size	41.4x3.9x4.8
functional name		colour	light brown/grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked F2-2 sharpened one side.				

max length	41.4	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19891

simple name	knife handle, broken	period	Old Kingdom	size	
functional name		colour	honey coloured	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Seitenbezogenheit.				

max length	46.9	max width	30	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19892
simple name	blade, unretouched	period	Old Kingdom	size	24.3x19.2x3.3
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	24.3	max width	19.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	19.2	thickness(half)	3.9	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19893
simple name	blade, unretouched	period	Old Kingdom	size	70.5x12.6x4.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	70.5	max width	14.5	retouch	
width(quarter)	14.5	thickness(quarter)	3.8	termination	
width(half)	12.6	thickness(half)	4.5	blade part	proximal
width(3 quarter)	9.8	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19894
simple name	blade, unretouched	period	Old Kingdom	size	47.6x9.5x5.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	47.6	max width	10.7	retouch	
width(quarter)	10.7	thickness(quarter)	3.7	termination	
width(half)	9.5	thickness(half)	5.7	blade part	distal
width(3 quarter)	8.1	thickness(3 quarter)	4.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19896
simple name	blade, unretouched	period	Old Kingdom	size	52.5x10.8x4.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	52.5	max width	11.2	retouch	
width(quarter)	11	thickness(quarter)	4.5	termination	
width(half)	10.8	thickness(half)	4.3	blade part	proximal
width(3 quarter)	11.2	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19897
simple name	blade, unretouched	period	Old Kingdom	size	87.9x14.8x4.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	89.9	max width	14.8	retouch	
width(quarter)	14.1	thickness(quarter)	5.1	termination	
width(half)	14.8	thickness(half)	4.6	blade part	complete
width(3 quarter)	11.5	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19898
simple name	blade, unretouched	period	Old Kingdom	size	75x11.7x3.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked 1.				
max length	75	max width	13.5	retouch	
width(quarter)	13.5	thickness(quarter)	3.5	termination	
width(half)	11.7	thickness(half)	3.6	blade part	complete
width(3 quarter)	7.8	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19899
simple name	blade, unretouched	period	Old Kingdom	size	60.5x12.8x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	60.5	max width	13.3	retouch	
width(quarter)	13.3	thickness(quarter)	3.3	termination	
width(half)	12.8	thickness(half)	3.1	blade part	proximal
width(3 quarter)	10.7	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19900
simple name	blade, unretouched	period	Old Kingdom	size	78.3x10.4x4.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	78.3	max width	14.6	retouch	
width(quarter)	14.6	thickness(quarter)	3.6	termination	
width(half)	14.4	thickness(half)	4.3	blade part	proximal
width(3 quarter)	12.6	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19901
simple name	blade, unretouched	period	Old Kingdom	size	37.9x10.4x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	37.9	max width	11	retouch	
width(quarter)	11	thickness(quarter)	3.4	termination	
width(half)	10.4	thickness(half)	3.3	blade part	proximal
width(3 quarter)	10.7	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19902
simple name	blade, unretouched	period	Old Kingdom	size	67.7x8.5x2.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Slight lip.				
max length	67.7	max width	8.6	retouch	
width(quarter)	8.6	thickness(quarter)	2.5	termination	
width(half)	8.5	thickness(half)	2.9	blade part	proximal
width(3 quarter)	8.6	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19903
simple name	blade, unretouched	period	Old Kingdom	size	61.1x10x4.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	61.1	max width	10.8	retouch	
width(quarter)	10.8	thickness(quarter)	4.2	termination	
width(half)	10	thickness(half)	4.1	blade part	proximal
width(3 quarter)	7.7	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19904
simple name	blade, retouched, lateral	period	Old Kingdom	size	29.7x10.9x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	29.7	max width	10.9	retouch	retouch dorsal left
width(quarter)	10	thickness(quarter)	2	termination	
width(half)	10.9	thickness(half)	3.9	blade part	proximal
width(3 quarter)	10.5	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19905
simple name	blade, unretouched	period	Old Kingdom	size	44x15.1x3.3
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	44	max width	15.5	retouch	
width(quarter)	15	thickness(quarter)	3.5	termination	
width(half)	15.1	thickness(half)	3.3	blade part	proximal
width(3 quarter)	15.5	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19906
simple name	blade, unretouched	period	Old Kingdom	size	28.8x12.3x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	28.8	max width	12.3	retouch	
width(quarter)	11.3	thickness(quarter)	3	termination	
width(half)	12.3	thickness(half)	2.7	blade part	proximal
width(3 quarter)	11.4	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19907
simple name	blade, unretouched	period	Old Kingdom	size	60.2x12.9x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	60.2	max width	13.3	retouch	
width(quarter)	13.3	thickness(quarter)	3.2	termination	
width(half)	12.9	thickness(half)	3.9	blade part	proximal
width(3 quarter)	10.5	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19908

simple name	blade, unretouched	period	Old Kingdom	size	33.4x13.4x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	33.4	max width	14	retouch			
width(quarter)	14	thickness(quarter)	3.2			termination	
width(half)	13.4	thickness(half)	2.7			blade part	proximal
width(3 quarter)	13.2	thickness(3 quarter)	2.6			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19909

simple name	blade, unretouched	period	Old Kingdom	size	24.7x7x1.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	24.7	max width	7	retouch			
width(quarter)	7	thickness(quarter)				termination	
width(half)		thickness(half)	1.5			blade part	proximal
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19910

simple name	blade, unretouched	period	Old Kingdom	size	59.2x11.5x2.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	59.2	max width	11.5	retouch			
width(quarter)	10.8	thickness(quarter)	3.1			termination	
width(half)	11.5	thickness(half)	2.8			blade part	complete
width(3 quarter)	9.2	thickness(3 quarter)	2.5			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19911

simple name	blade, unretouched	period	Old Kingdom	size	86.6x12.6x4.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Slight lip.				

max length	86.6	max width	13.2	retouch	
width(quarter)	13.2	thickness(quarter)	5	termination	
width(half)	12.6	thickness(half)	4.4	blade part	complete
width(3 quarter)	13	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19912

simple name	blade, unretouched	period	Old Kingdom	size	57x8.5x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	57	max width	8.4	retouch	
width(quarter)	8.4	thickness(quarter)	2.6	termination	
width(half)	8.5	thickness(half)	3	blade part	proximal
width(3 quarter)	7.5	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19913

simple name	blade, unretouched	period	Old Kingdom	size	64.5x11.1x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Dorsal hinge fracture.				

max length	64.5	max width	11.1	retouch	
width(quarter)	11	thickness(quarter)	3.8	termination	
width(half)	11.1	thickness(half)	4.2	blade part	proximal
width(3 quarter)	8.8	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19914
simple name	blade, unretouched	period	Old Kingdom	size	82.9x13x5.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '11'.				
max length	82.9	max width	15.1	retouch	
width(quarter)	15.1	thickness(quarter)	4.8	termination	
width(half)	13	thickness(half)	5.2	blade part	proximal
width(3 quarter)	9.5	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19915
simple name	blade, unretouched	period	Old Kingdom	size	60.6x13.8x3.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	60.6	max width	13.8	retouch	
width(quarter)	13.8	thickness(quarter)	2.8	termination	
width(half)	12.2	thickness(half)	3.5	blade part	proximal
width(3 quarter)	11	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19916
simple name	blade, unretouched	period	Old Kingdom	size	45.9x11.8x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	45.9	max width	13.3	retouch	
width(quarter)	13.3	thickness(quarter)	3	termination	
width(half)	11.8	thickness(half)	3	blade part	proximal
width(3 quarter)	11.5	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19917
simple name	blade, retouched, lateral	period	Old Kingdom	size	34.5x10x3.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	34.5	max width	10	retouch	retouch dorsal right
width(quarter)	10	thickness(quarter)	3.8	termination	
width(half)	9.4	thickness(half)	3	blade part	proximal
width(3 quarter)	8.2	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19918
simple name	blade, retouched, lateral	period	Old Kingdom	size	40.6x12.7x4.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	40.6	max width	12.7	retouch	retouch dorsal right and left
width(quarter)	11.3	thickness(quarter)	4.4	termination	
width(half)	12.7	thickness(half)	4	blade part	proximal
width(3 quarter)	12.4	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19919
simple name	blade, unretouched	period	Old Kingdom	size	50x13.4x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	50	max width	13.4	retouch	
width(quarter)	13.4	thickness(quarter)	3.3	termination	
width(half)	12.4	thickness(half)	3.3	blade part	proximal
width(3 quarter)	9.1	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19920
simple name	blade, unretouched	period	Old Kingdom	size	59.5x13.7x4.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Slight lip.				
max length	59.5	max width	13.7	retouch	
width(quarter)	13.7	thickness(quarter)	4.2	termination	
width(half)	13.2	thickness(half)	4.2	blade part	proximal
width(3 quarter)	9.5	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19921
simple name	blade, unretouched	period	Old Kingdom	size	74.6x14.6x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '11'.				
max length	74.6	max width	14.6	retouch	
width(quarter)	13.5	thickness(quarter)	4.2	termination	
width(half)	14.6	thickness(half)	3.9	blade part	proximal
width(3 quarter)	12.7	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19923
simple name	blade, unretouched	period	Old Kingdom	size	27.7x10.4x3.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	27.7	max width	10.4	retouch	
width(quarter)	10	thickness(quarter)	3.1	termination	
width(half)	10.7	thickness(half)	2.7	blade part	proximal
width(3 quarter)	10.3	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19924
simple name	blade, unretouched	period	Old Kingdom	size	41.2x12.6x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	41.2	max width	12.6	retouch	
width(quarter)	12.6	thickness(quarter)	3.9	termination	
width(half)	10.8	thickness(half)	3.7	blade part	proximal
width(3 quarter)	9.6	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19925
simple name	blade, unretouched	period	Old Kingdom	size	37.9x12.2x2.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	37.9	max width	12.1	retouch	
width(quarter)	12.1	thickness(quarter)	2.7	termination	
width(half)	10.9	thickness(half)	2.2	blade part	proximal
width(3 quarter)	9	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19926
simple name	blade, unretouched	period	Old Kingdom	size	56.9x10.6x3.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	56.9	max width	10.6	retouch	
width(quarter)	10.5	thickness(quarter)	3.2	termination	
width(half)	10.6	thickness(half)	3.5	blade part	proximal
width(3 quarter)	9.2	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19927
simple name	blade, unretouched	period	Old Kingdom	size	52.5x9.8x2.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '25'				
max length	52.5	max width	9.8	retouch	
width(quarter)	9.8	thickness(quarter)	2.5	termination	
width(half)	8.4	thickness(half)	2.6	blade part	proximal
width(3 quarter)	7.6	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19928
simple name	blade, unretouched	period	Old Kingdom	size	55.1x13.8x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	55.1	max width	13.8	retouch	
width(quarter)	13.8	thickness(quarter)	3	termination	
width(half)	12.3	thickness(half)	3.9	blade part	proximal
width(3 quarter)	11.5	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19929
simple name	blade, unretouched	period	Old Kingdom	size	48x9.8x2.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	48	max width	9.8	retouch	
width(quarter)	9.8	thickness(quarter)	2.4	termination	
width(half)	9.6	thickness(half)	2.5	blade part	proximal
width(3 quarter)	7.8	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19930
simple name	blade, unretouched	period	Old Kingdom	size	48.4x11.2x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	48.4	max width	11.2	retouch	
width(quarter)	11.1	thickness(quarter)	3.4	termination	
width(half)	11.2	thickness(half)	3.5	blade part	proximal
width(3 quarter)	10.8	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19931
simple name	blade, unretouched	period	Old Kingdom	size	23.6x10x3.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	23.6	max width	10	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	10	thickness(half)	3.1	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19932
simple name	blade, unretouched	period	Old Kingdom	size	57.8x14.3x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	57.8	max width	14.3	retouch	
width(quarter)	14.3	thickness(quarter)	2.7	termination	
width(half)	12.9	thickness(half)	2.6	blade part	proximal
width(3 quarter)	12.2	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19933
simple name	blade, unretouched	period	Old Kingdom	size	58.3x12.8x4.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	58.3	max width	12.8	retouch	
width(quarter)	12	thickness(quarter)	4.9	termination	
width(half)	12	thickness(half)	4.9	blade part	proximal
width(3 quarter)	12.8	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19934
simple name	blade, unretouched	period	Old Kingdom	size	36.4x12.2x3.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	36.4	max width	13	retouch	
width(quarter)	12.2	thickness(quarter)	3.3	termination	
width(half)	11.9	thickness(half)	3.3	blade part	proximal
width(3 quarter)	13	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19935
simple name	blade, unretouched	period	Old Kingdom	size	45x12.8x4.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	45	max width	12.8	retouch	
width(quarter)	12.8	thickness(quarter)	4.5	termination	
width(half)	11.2	thickness(half)	3.4	blade part	proximal
width(3 quarter)	10	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19936
simple name	blade, unretouched	period	Old Kingdom	size	79.1x12.5x3.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	79.1	max width	12.5	retouch	
width(quarter)	12	thickness(quarter)	3.7	termination	
width(half)	12.5	thickness(half)	3.6	blade part	complete
width(3 quarter)	10.5	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19937
simple name	blade, unretouched	period	Old Kingdom	size	60.2x9.4x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	60.2	max width	9.4	retouch	
width(quarter)	9.4	thickness(quarter)	4.2	termination	
width(half)	9.3	thickness(half)	4.2	blade part	distal
width(3 quarter)	7.4	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19938
simple name	blade, unretouched	period	Old Kingdom	size	46.3x10.9x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	46.3	max width	10.9	retouch	
width(quarter)	10.7	thickness(quarter)	3.6	termination	
width(half)	10.9	thickness(half)	3.9	blade part	distal
width(3 quarter)	9.5	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19939
simple name	blade, unretouched	period	Old Kingdom	size	48.2x14.3x5.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	48.2	max width	14.3	retouch	
width(quarter)	14.3	thickness(quarter)	5.2	termination	
width(half)	13.1	thickness(half)	5.1	blade part	distal
width(3 quarter)	10.6	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19940
simple name	blade, unretouched	period	Old Kingdom	size	60x11.5x5.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	60	max width	11.5	retouch	
width(quarter)	11.5	thickness(quarter)	4	termination	
width(half)	11.1	thickness(half)	4.5	blade part	distal
width(3 quarter)	9.1	thickness(3 quarter)	5.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19942
simple name	blade, unretouched	period	Old Kingdom	size	76.8x14.9x7.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Slight lip.				
max length	76.8	max width	14.9	retouch	
width(quarter)	14.5	thickness(quarter)	5.5	termination	
width(half)	14.7	thickness(half)	7.4	blade part	complete
width(3 quarter)	14.9	thickness(3 quarter)	5.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19943
simple name	blade, unretouched	period	Old Kingdom	size	86.5x14.1x5.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	86.5	max width	14.1	retouch	
width(quarter)	13.5	thickness(quarter)	4.4	termination	
width(half)	14.1	thickness(half)	5.2	blade part	complete
width(3 quarter)	13.4	thickness(3 quarter)	5.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19944
simple name	blade, unretouched	period	Old Kingdom	size	84x12.2x5.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	84	max width	12.2	retouch	
width(quarter)	10.5	thickness(quarter)	4.5	termination	
width(half)	12.2	thickness(half)	5.5	blade part	complete
width(3 quarter)	9.9	thickness(3 quarter)	5.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19946
simple name	blade, unretouched	period	Old Kingdom	size	86.6x12.8x4.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	86.6	max width	12.8	retouch	
width(quarter)	12.8	thickness(quarter)	3.5	termination	
width(half)	12.4	thickness(half)	3.8	blade part	complete
width(3 quarter)	8.5	thickness(3 quarter)	4.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19947
simple name	blade, unretouched	period	Old Kingdom	size	75.8x12.4x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	75.8	max width	12.4	retouch	
width(quarter)	12.4	thickness(quarter)	4.2	termination	
width(half)	12	thickness(half)	4	blade part	complete
width(3 quarter)	11.8	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19948
simple name	blade, unretouched	period	Old Kingdom	size	58.2x8.1x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	58.2	max width	8.1	retouch	
width(quarter)	6.4	thickness(quarter)	1.5	termination	
width(half)	8.1	thickness(half)	2.2	blade part	medial
width(3 quarter)	6.9	thickness(3 quarter)	1.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19949
simple name	blade, unretouched	period	Old Kingdom	size	22.2x9x2.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	22.2	max width	9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9	thickness(half)	2.4	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19950
simple name	blade, unretouched	period	Old Kingdom	size	42.7x20.3x5.3
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Previous hinge fracture.				

max length	42.7	max width	20.3	retouch	
width(quarter)	17.3	thickness(quarter)	5.3	termination	
width(half)	20.3	thickness(half)	4.5	blade part	medial
width(3 quarter)	17.7	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19951
simple name	blade, unretouched	period	Old Kingdom	size	43.2x12.7x2.7
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	43.2	max width	12.7	retouch	
width(quarter)	12.7	thickness(quarter)	2.4	termination	
width(half)	11.1	thickness(half)	2.7	blade part	medial
width(3 quarter)	9.1	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19952
simple name	blade, unretouched	period	Old Kingdom	size	24.6x14x4.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	24.6	max width	14	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	14	thickness(half)	4.1	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19953
simple name	blade, unretouched	period	Old Kingdom	size	27.2x12.1x3.4
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	27.2	max width	12.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	12.2	thickness(half)	3.4	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19955
simple name	blade, unretouched	period	Old Kingdom	size	25.2x11.8x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	25.2	max width	11.8	retouch	
width(quarter)	11.8	thickness(quarter)	3.7	termination	
width(half)	11	thickness(half)	3	blade part	medial
width(3 quarter)	10	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19954
simple name	blade, unretouched	period	Old Kingdom	size	30x13x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	30	max width	13	retouch	
width(quarter)	13	thickness(quarter)	4	termination	
width(half)	12.5	thickness(half)	4.2	blade part	medial
width(3 quarter)	12.3	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19956
simple name	blade, unretouched	period	Old Kingdom	size	32x8.6x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	32	max width	8.6	retouch	
width(quarter)	8	thickness(quarter)	3	termination	
width(half)	8.6	thickness(half)	2.7	blade part	medial
width(3 quarter)	8.5	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19957
simple name	blade, unretouched	period	Old Kingdom	size	28.7x8x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	28.7	max width	8	retouch	
width(quarter)	8	thickness(quarter)	2	termination	
width(half)	6.2	thickness(half)	2	blade part	medial
width(3 quarter)	6.1	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19958
simple name	blade, unretouched	period	Old Kingdom	size	21.7x11.1x2.3
functional name		colour	light brown/grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	21.7	max width	11.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	11.1	thickness(half)	2.3	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19959

simple name	blade, unretouched	period	Old Kingdom			size	24.8x11.6x3.2
functional name			colour	light brown/grey		shape	intermediate
excavation no			house/tomb			context	

date evidence	
references	catalogue number 279
description	

max length	24.8	max width	11.6	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)	11.6	thickness(half)	3.2			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19960

simple name	blade, unretouched	period	Old Kingdom			size	27.7x12,7x2.5
functional name			colour	light brown/grey		shape	intermediate
excavation no			house/tomb			context	

date evidence	
references	catalogue number 279
description	

max length	27.6	max width	12.7	retouch			
width(quarter)	12.2	thickness(quarter)	1.9			termination	
width(half)	12.7	thickness(half)	2.3			blade part	medial
width(3 quarter)	12.2	thickness(3 quarter)	2.5			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19961

simple name	blade, unretouched	period	Old Kingdom			size	18.4x9.5x2
functional name			colour	light brown/grey		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	catalogue number 279
description	

max length	18.4	max width	9.5	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)	9.5	thickness(half)	2			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19962
simple name	blade, unretouched	period	Old Kingdom	size	30.1x10.1x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	30.1	max width	11.1	retouch	
width(quarter)	10	thickness(quarter)	3	termination	
width(half)	10.1	thickness(half)	3.3	blade part	medial
width(3 quarter)	11.1	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19963
simple name	blade, unretouched	period	Old Kingdom	size	17.2x9.4x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	17.2	max width	9.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9.4	thickness(half)	2.7	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19964
simple name	blade, unretouched	period	Old Kingdom	size	27.7x10.5x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	27.7	max width	10.5	retouch	
width(quarter)	9.2	thickness(quarter)	3	termination	
width(half)	10	thickness(half)	2.8	blade part	medial
width(3 quarter)	10.5	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19965

simple name	blade, unretouched	period	Old Kingdom	size	38x11.4x2.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	38	max width	11.4	retouch			
width(quarter)	11	thickness(quarter)	2.5			termination	
width(half)	11.4	thickness(half)	2.3			blade part	medial
width(3 quarter)	11.2	thickness(3 quarter)	2.5			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19990

simple name	blade, unretouched	period	Old Kingdom	size	77.7x13.5x5.5
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	77.7	max width	14.5	retouch			
width(quarter)	12.4	thickness(quarter)	5.4			termination	
width(half)	13.5	thickness(half)	5.5			blade part	distal
width(3 quarter)	14.5	thickness(3 quarter)	6.1			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19991

simple name	blade, unretouched	period	Old Kingdom	size	36.4x11.6x3.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	36.4	max width	11.6	retouch			
width(quarter)	11.6	thickness(quarter)	3.5			termination	
width(half)	11.5	thickness(half)	3			blade part	distal
width(3 quarter)	7.6	thickness(3 quarter)	2.9			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19992
simple name	blade, retouched, notche	period	Old Kingdom	size	79x11.5x5.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Notched.				
max length	79	max width	11.5	retouch	
width(quarter)	11.5	thickness(quarter)	4.7	termination	
width(half)	11.1	thickness(half)	5.4	blade part	complete
width(3 quarter)	10.1	thickness(3 quarter)	5.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19994
simple name	blade, retouched, distal	period	Old Kingdom	size	74.8x12.9x5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Sharpened distal point.				
max length	74.8	max width	12.9	retouch	
width(quarter)	12.9	thickness(quarter)	4.9	termination	
width(half)	13	thickness(half)	5	blade part	complete
width(3 quarter)	12.5	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19995
simple name	blade, unretouched	period	Old Kingdom	size	83.6x12.7x3.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	83.6	max width	12.7	retouch	
width(quarter)	12.4	thickness(quarter)	3.6	termination	
width(half)	12.7	thickness(half)	3	blade part	complete
width(3 quarter)	7.7	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19996

simple name	blade, unretouched	period	Old Kingdom	size	70.3x10.8x4.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description

max length	70.3	max width	10.8	retouch	
width(quarter)	10.8	thickness(quarter)	4	termination	
width(half)	10.8	thickness(half)	4.6	blade part	complete
width(3 quarter)	8.7	thickness(3 quarter)	3.6	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19997

simple name	blade, retouched, distal	period	Old Kingdom	size	74.6x11.9x4.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description: Pointed end.

max length	74.6	max width	11.9	retouch	
width(quarter)	10.9	thickness(quarter)	4	termination	
width(half)	11	thickness(half)	4.4	blade part	complete
width(3 quarter)	11.9	thickness(3 quarter)	4.5	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19998

simple name	blade, unretouched	period	Old Kingdom	size	63.5x13.5x3.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description

max length	63.5	max width	13.5	retouch	
width(quarter)	13.5	thickness(quarter)	3.3	termination	
width(half)	12.2	thickness(half)	3	blade part	complete
width(3 quarter)	12.2	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19999
simple name	blade, unretouched	period	Old Kingdom	size	74.2x11.8x3.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Crested?				
max length	74.2	max width	11.8	retouch	
width(quarter)	11.8	thickness(quarter)	3.6	termination	
width(half)	11.5	thickness(half)	3.5	blade part	complete
width(3 quarter)	9.8	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20000
simple name	blade, unretouched	period	Old Kingdom	size	65x12.9x5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	65	max width	12.9	retouch	
width(quarter)	12.9	thickness(quarter)	5	termination	
width(half)	12	thickness(half)	4.8	blade part	complete
width(3 quarter)	10.1	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20001
simple name	blade, crested	period	Old Kingdom	size	56.3x9.5x5.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Crested right.				
max length	56.3	max width	9.5	retouch	
width(quarter)	9.2	thickness(quarter)	5.3	termination	
width(half)	9.5	thickness(half)	5.2	blade part	distal
width(3 quarter)	9.2	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20002
simple name	blade, unretouched	period	Old Kingdom	size	76.4x14.9x4.6
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Slight lip and pencil mark '25'				
max length	76.4	max width	14.9	retouch	
width(quarter)	14.9	thickness(quarter)	4.6	termination	
width(half)	14.9	thickness(half)	4.6	blade part	complete
width(3 quarter)	11.4	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20003
simple name	blade, unretouched	period	Old Kingdom	size	80.1x12.5x3.8
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	At distal end removals on ventral side.				
max length	80.1	max width	12.5	retouch	
width(quarter)	11.4	thickness(quarter)	3.5	termination	
width(half)	12.5	thickness(half)	3.5	blade part	complete
width(3 quarter)	12.2	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20004
simple name	blade, unretouched	period	Old Kingdom	size	99.1x13x4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Slight lip. Ventral remals right and left.				
max length	99.1	max width	13	retouch	
width(quarter)	12.9	thickness(quarter)	3.2	termination	
width(half)	12.9	thickness(half)	3.9	blade part	complete
width(3 quarter)	13	thickness(3 quarter)	4.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20032
simple name	blade, unretouched	period	Old Kingdom	size	77.8x15.2x5,1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Ventral retouch right and left.				
max length	77.8	max width	15.2	retouch	
width(quarter)	15.2	thickness(quarter)	3.5	termination	
width(half)	11.3	thickness(half)	3.7	blade part	complete
width(3 quarter)	10.5	thickness(3 quarter)	5.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20030
simple name	blade, unretouched	period	Old Kingdom	size	67.2x13.8x3.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	67.2	max width	13.8	retouch	
width(quarter)	13.8	thickness(quarter)	3	termination	
width(half)	12.1	thickness(half)	4	blade part	complete
width(3 quarter)	9	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20033
simple name	blade, unretouched	period	Old Kingdom	size	52.7x11.7x5.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Dorsal retouch left.				
max length	52.7	max width	11.7	retouch	
width(quarter)	10.1	thickness(quarter)	3.7	termination	
width(half)	10.6	thickness(half)	5.4	blade part	distal
width(3 quarter)	11.7	thickness(3 quarter)	4.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20005
simple name	blade, unretouched	period	Old Kingdom	size	54.9x10.4x3.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	54.9	max width	10.4	retouch	
width(quarter)	10.4	thickness(quarter)	2.9	termination	
width(half)	10.3	thickness(half)	3.1	blade part	
width(3 quarter)	7.9	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20006
simple name	blade, unretouched	period	Old Kingdom	size	88.9x16.4x3.5
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	88.9	max width	16.4	retouch	
width(quarter)	15.1	thickness(quarter)	2.9	termination	
width(half)	16.4	thickness(half)	3.1	blade part	
width(3 quarter)	15.4	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20007
simple name	blade, unretouched	period	Old Kingdom	size	52.7x10.5x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Slight lip.				
max length	52.7	max width	10.5	retouch	
width(quarter)	10.5	thickness(quarter)	3	termination	
width(half)	9	thickness(half)	3	blade part	
width(3 quarter)	7.3	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20008
simple name	blade, unretouched	period	Old Kingdom	size	28.1x13.3x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	28.7	max width	13.3	retouch	
width(quarter)	11.8	thickness(quarter)	2.7	termination	
width(half)	13.3	thickness(half)	2.6	blade part	
width(3 quarter)	13.3	thickness(3 quarter)	2.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20009
simple name	blade, unretouched	period	Old Kingdom	size	32.4x10x3.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	32.4	max width	10	retouch	
width(quarter)	10	thickness(quarter)	3.2	termination	
width(half)	9.4	thickness(half)	2.4	blade part	
width(3 quarter)	9.7	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20010
simple name	blade, unretouched	period	Old Kingdom	size	63x14.2x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	63	max width	14.2	retouch	
width(quarter)	12.6	thickness(quarter)	3.3	termination	
width(half)	13.4	thickness(half)	3.3	blade part	
width(3 quarter)	14.2	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20011

simple name	blade, unretouched	period	Old Kingdom	size	54x8.1x3.2
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	54	max width	8.1	retouch			
width(quarter)	8.1	thickness(quarter)	3.2			termination	
width(half)	7.7	thickness(half)	3.1			blade part	
width(3 quarter)	7	thickness(3 quarter)	3.2			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20012

simple name	blade, unretouched	period	Old Kingdom	size	42.2x12.9x3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	42.2	max width	12.9	retouch			
width(quarter)	12.9	thickness(quarter)	3			termination	
width(half)	12.5	thickness(half)	2.7			blade part	
width(3 quarter)	12	thickness(3 quarter)	2.6			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20013

simple name	blade, unretouched	period	Old Kingdom	size	74.1x10.17x6.1
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	74.1	max width	10.2	retouch			
width(quarter)	10.2	thickness(quarter)	5.4			termination	
width(half)	10.8	thickness(half)	6.1			blade part	
width(3 quarter)	10.2	thickness(3 quarter)	5.6			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20014
simple name	blade, unretouched	period	Old Kingdom	size	65.6x12.2x3.9
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	65.6	max width	12.2	retouch	
width(quarter)	11.9	thickness(quarter)	3.1	termination	
width(half)	12.2	thickness(half)	3.9	blade part	
width(3 quarter)	10.1	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20015
simple name	blade, unretouched	period	Old Kingdom	size	63.3x10.4x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	63.3	max width	10.4	retouch	
width(quarter)	9.6	thickness(quarter)	3	termination	
width(half)	9.2	thickness(half)	3.6	blade part	
width(3 quarter)	10.4	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20016
simple name	blade, unretouched	period	Old Kingdom	size	45.1x13.3x6.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	45.1	max width	13.3	retouch	
width(quarter)	13.3	thickness(quarter)	6.2	termination	
width(half)	11.7	thickness(half)	5.3	blade part	
width(3 quarter)	12	thickness(3 quarter)	4.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20017
simple name	blade, unretouched	period	Old Kingdom	size	85.8x12x4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	85.8	max width	12	retouch	
width(quarter)	12	thickness(quarter)	3.3	termination	
width(half)	11	thickness(half)	4	blade part	
width(3 quarter)	8	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20018
simple name	blade, unretouched	period	Old Kingdom	size	40.6x14.9x5.6
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	40.6	max width	14.3	retouch	
width(quarter)	14.3	thickness(quarter)	5.3	termination	
width(half)	14	thickness(half)	5.6	blade part	
width(3 quarter)	14.9	thickness(3 quarter)	5.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20019
simple name	blade, unretouched	period	Old Kingdom	size	32.8x10.6x2.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					
max length	32.8	max width	10.6	retouch	
width(quarter)	10.4	thickness(quarter)	2.1	termination	
width(half)	10.6	thickness(half)	2.2	blade part	
width(3 quarter)	10.4	thickness(3 quarter)	2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20020

simple name	blade, crested	period	Old Kingdom	size	75.3x13.9x4.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	75.3	max width	13.9	retouch	
width(quarter)	12	thickness(quarter)	3.5	termination	
width(half)	13	thickness(half)	3.6	blade part	
width(3 quarter)	13.9	thickness(3 quarter)	4.3	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20021

simple name	blade, unretouched	period	Old Kingdom	size	57.7x11.5x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	57.7	max width	11.5	retouch	
width(quarter)	11.5	thickness(quarter)	3.2	termination	
width(half)	11.3	thickness(half)	3.3	blade part	
width(3 quarter)	10.4	thickness(3 quarter)	2.9	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20022

simple name	blade, unretouched	period	Old Kingdom	size	78.7x10.7x4.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	catalogue number 279
description	

max length	78.7	max width	10.7	retouch	
width(quarter)	10.7	thickness(quarter)	2.8	termination	
width(half)	9.8	thickness(half)	4.1	blade part	
width(3 quarter)	8.7	thickness(3 quarter)	4.4	segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20023

simple name	blade, unretouched	period	Old Kingdom	size	59.8x12.2x4.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description

max length	59.8	max width	13.2	retouch	
width(quarter)	11.4	thickness(quarter)	4	termination	
width(half)	12.2	thickness(half)	4	blade part	
width(3 quarter)	13.2	thickness(3 quarter)	4.6	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20024

simple name	blade, unretouched	period	Old Kingdom	size	51.9x14.2x2.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description: Marked in pencil '3 MAR'.

max length	51.9	max width	14.2	retouch	
width(quarter)	13	thickness(quarter)	2.6	termination	
width(half)	14	thickness(half)	2.7	blade part	
width(3 quarter)	14.2	thickness(3 quarter)	2.6	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20025

simple name	blade, unretouched	period	Old Kingdom	size	54.9x15.9x3.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 279

description

max length	14.9	max width	15.9	retouch	
width(quarter)	12.7	thickness(quarter)	3.2	termination	
width(half)	10.1	thickness(half)	2.7	blade part	
width(3 quarter)	10.9	thickness(3 quarter)	2.5	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20026
simple name	blade, unretouched	period	Old Kingdom	size	50.5x11.1x4.7
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	50.5	max width	11.3	retouch	
width(quarter)	11.1	thickness(quarter)	3.7	termination	
width(half)	10.8	thickness(half)	4.7	blade part	
width(3 quarter)	11.3	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20027
simple name	blade, unretouched	period	Old Kingdom	size	67x8.9x3.3
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	67	max width	8.9	retouch	
width(quarter)	8.2	thickness(quarter)	2.3	termination	
width(half)	8.9	thickness(half)	3	blade part	
width(3 quarter)	8	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20028
simple name	blade, unretouched	period	Old Kingdom	size	75.3x10.2x4.2
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	75.3	max width	10.2	retouch	
width(quarter)	9.8	thickness(quarter)	3.6	termination	
width(half)	10.2	thickness(half)	4.2	blade part	
width(3 quarter)	9.3	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20029

simple name	blade, unretouched	period	Old Kingdom	size	36.1x9.1x4.4
functional name		colour	light brown/grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description					

max length	36.1	max width	9.1	retouch	
width(quarter)	8.4	thickness(quarter)	4	termination	
width(half)	8.9	thickness(half)	4.4	blade part	
width(3 quarter)	9.1	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Petrie	MUSEUM NO.	UC20902

simple name	sickle, end	period	Middle Kingdom, 11th Dynasty	size	62.2x20.2x3.8
functional name	sickle	colour	mid grey-brown	shape	
excavation no		house/tomb	tomb 324	context	
date evidence					
references	Museum register states D. XI Tomb 324. Not mentioned in Brunton catalogue.				
description					

max length	62.2	max width	20.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE		MUSEUM	Petrie	MUSEUM NO.	UC59582

simple name	burnisher	period	New Kingdom	size	51.4x10.1x7.1
functional name		colour	mid grey-brown	shape	
excavation no		house/tomb		context	
date evidence	The dating must be based on the similarity to UC 145 from Amarna. A very similar item in the Petrie Museum collection is catalogued as a chalcedony polisher for papyri, Dynasty 1 (UC15277)				
references	W M F Petrie Objects of Daily Use p 64, pl. 56 no 35				
description					

max length	51.4	max width	10.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE		MUSEUM	Petrie	MUSEUM NO.	UC59581

simple name	burnisher	period	New Kingdom	size	70.4x11.4x4.3
functional name		colour	translucent light bro	shape	
excavation no		house/tomb		context	

date evidence	The dating must be based on the similarity to UC 145 from Amarna. A very similar item in the Petrie Museum collection is catalogued as a chalcedony polisher for papyri, Dynasty 1 (UC15277)
references	W M F Petrie Objects of Daily Use p 64, pl. 56 n0 35
description	

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Tarkhan	MUSEUM	Petrie	MUSEUM NO.	UC37392

simple name	blade, retouched, lateral	period	Third Intermediate Period	size	48.1x14.5x3.9
functional name		colour	mid-dark grey	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	48.1	max width	14.5	retouch	retouch ventral, both short ends steeply r
width(quarter)	13	thickness(quarter)	3.8	termination	
width(half)	14.5	thickness(half)	3.8	blade part	medial
width(3 quarter)	13.2	thickness(3 quarter)	3.9	segmented/truncated	truncated

wear	

PLACE	Tarkhan	MUSEUM	Petrie	MUSEUM NO.	UC37271

simple name	blade, unretouched	period	Third Intermediate Period	size	21.8x9.1x4.5
functional name		colour	light grey-brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Proximal end worn smooth.

max length	21.8	max width	9.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Meydum	MUSEUM	Petrie	MUSEUM NO.	UC31120

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	32.5x11.3x2.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Catalogue Card-New Kingdom Cemetery nr. El. Ferzeh Tomb 79. Flint fragment unpublished				
description					

max length	32.5	max width	11.3	retouch	
width(quarter)	7.7	thickness(quarter)	2.2	termination	
width(half)	9.6	thickness(half)	2.7	blade part	complete
width(3 quarter)	11.3	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE		MUSEUM	Petrie	MUSEUM NO.	UC59580

simple name	burnisher	period	New Kingdom	size	
functional name		colour	mid grey-brown	shape	
excavation no		house/tomb		context	
date evidence	The dating must be based on the similarity to UC 145 from Amarna. A very similar item in the Petrie Museum collection is catalogued as a chalcedony polisher for papyri, Dynasty 1 (UC15277)				
references					
description					

max length	66.9	max width	16	retouch	
width(quarter)		thickness(quarter)	9	termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC21225

simple name	knife fragment	period	Middle Kingdom	size	125x50.2x6.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Card-Fort I 7.12.; Emery, Smith and Mallard 1979, 116 number 159, pl.102B.				
description	No signs of sharpening.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC21226

simple name	scraper, triangular	period	Middle Kingdom-New Kingdom		size	78x68.9x9.2	
functional name			colour	mid brown	shape		
excavation no			house/tomb		context		

date evidence	
references	
description	

max length	78	max width	68.9	retouch			
width(quarter)		thickness(quarter)	9.2			termination	
width(half)		thickness(half)	9			blade part	
width(3 quarter)		thickness(3 quarter)	9.2			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC21227

simple name	blade, unretouched	period	Middle Kingdom-New Kingdom		size	61.2x16.5x6.3	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		

date evidence	
references	Emery, Smith and Mallard 1979, 116 number 13 p. 102A.
description	L.7.H.

max length	61.2	max width	16.5	retouch			
width(quarter)	14.3	thickness(quarter)	4.4			termination	
width(half)	15.4	thickness(half)	5.1			blade part	proximal
width(3 quarter)	16.5	thickness(3 quarter)	6.3			segmented/truncated	

wear	

PLACE		MUSEUM	Petrie	MUSEUM NO.	UC21167

simple name	blade, retouched	period	Middle Kingdom-New Kingdom		size		
functional name			colour	mid-dark brown	shape	narrow	
excavation no			house/tomb		context		

date evidence	
references	
description	Steep retouch along lateral edges.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC21228

simple name	blade, retouched, lateral	period	Middle Kingdom-New Kingdom	size	84.7x19.5x7.9
functional name	broad/intermediate	colour	mid grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references	Emery, Smith and Mallard 1979, 116 number 351, pl. 102, 351.				
description	Marked 'K7-214'. Retouch dorsal left.				

max length	84.7	max width	19.5	retouch	
width(quarter)	16.7	thickness(quarter)	6.9	termination	
width(half)	17.5	thickness(half)	7.9	blade part	complete
width(3 quarter)	19.5	thickness(3 quarter)	7.4	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Petrie	MUSEUM NO.	UC27735vi

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	73.4x36.3x12.8
functional name	sickle	colour	mid-dark brown mo	shape	
excavation no		house/tomb		context	
date evidence					
references	Museum register reads 'KHH XVI 23, 28'				
description	Denticulated.				

max length	73.4	max width	36.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	12.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Hawara	MUSEUM	Petrie	MUSEUM NO.	UC28145

simple name	ad hoc	period	Roman	size	41.2x36.4x5
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked 'Hawara Roman vill'.				

max length	41.2	max width	36.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC20034
simple name	flake	period		size	52.2x41.4x9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	catalogue number 279				
description	Marked in pencil 'A4 surface'.				
max length	52.2	max width	41.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19757
simple name	scraper, triangular	period		size	51.6x53.9x8.1
functional name		colour	brown and grey ba	shape	
excavation no		house/tomb		context	
date evidence					
references	Catalogue card- Buhen Z 4-15				
description	Steep retouch 3 sides.				
max length	51.6	max width	53.9	retouch	
width(quarter)	33.5	thickness(quarter)	7.7	termination	
width(half)	49.5	thickness(half)	8.1	blade part	
width(3 quarter)	51.7	thickness(3 quarter)	8.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19756
simple name	flake	period	Old Kingdom	size	67.8x53.3x12.5
functional name		colour	mid-dark brown/gre	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	67.8	max width	53.3	retouch	
width(quarter)	34.5	thickness(quarter)	12.2	termination	
width(half)	48.8	thickness(half)	12.1	blade part	
width(3 quarter)	53.5	thickness(3 quarter)	12.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19755

simple name	axe head	period	Old Kingdom	size	80.2x68x13.5
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	80.2	max width	68	retouch	
width(quarter)	52	thickness(quarter)	10.8	termination	
width(half)	59.2	thickness(half)	13.2	blade part	
width(3 quarter)	67.8	thickness(3 quarter)	13.5	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19754

simple name	bifacial	period	Old Kingdom	size	73.8x34.3x10.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Marked '2 3/MAI A6-17'.

max length	73.8	max width	34.3	retouch	
width(quarter)	22.6	thickness(quarter)	7.3	termination	
width(half)	27.6	thickness(half)	9	blade part	
width(3 quarter)	32.4	thickness(3 quarter)	10.4	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19753

simple name	flake	period	Old Kingdom	size	85.2x43x5.9
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence

references: Catalogue card says 'pointed flint flake..A 6-17 WB Emery Kush XI pp 117-120)

description

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19752

simple name	scraper, triangular	period	Old Kingdom	size	86.4x46.5x8.6
functional name		colour	mid grey/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	86.4	max width	46.5	retouch	
width(quarter)	40.3	thickness(quarter)	8	termination	
width(half)	46.8	thickness(half)	8.6	blade part	
width(3 quarter)	40.8	thickness(3 quarter)	7.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19750

simple name	knife, fragment	period	Old Kingdom	size	80.9x34.9x7.7
functional name		colour	mid grey/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Seitenbezogenheit. pencil mark 5. Sharpened as though pointing to person.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19758

simple name	blade, unretouched	period	Old Kingdom	size	57.2x19.1x3.8
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 218				
description	Previous hinge fracture.				

max length	57.2	max width	19.1	retouch	
width(quarter)	19.1	thickness(quarter)	3.8	termination	
width(half)	17.3	thickness(half)	3.8	blade part	proximal
width(3 quarter)	13	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19759

simple name	blade, unretouched	period	Old Kingdom	size	69.7x17.8x5.2
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 218

description

max length	69.7	max width	17.8	retouch	
width(quarter)	17.8	thickness(quarter)	5.2	termination	
width(half)	16.5	thickness(half)	5.1	blade part	proximal
width(3 quarter)	13.9	thickness(3 quarter)	4.9	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19760

simple name	blade, unretouched	period	Old Kingdom	size	67x12.5x2.5
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 218

description

max length	67	max width	12.5	retouch	
width(quarter)	11.3	thickness(quarter)	2.2	termination	
width(half)	10.3	thickness(half)	2.5	blade part	complete
width(3 quarter)	8.9	thickness(3 quarter)	2.2	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19761

simple name	blade, unretouched	period	Old Kingdom	size	50x12x4.7
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references: catalogue number 218

description

max length	50	max width	12	retouch	
width(quarter)	12	thickness(quarter)	3.5	termination	
width(half)	11.3	thickness(half)	4.1	blade part	medial
width(3 quarter)	11.4	thickness(3 quarter)	4.7	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19762
simple name	blade, unretouched	period	Old Kingdom	size	62.4x13.5x4.4
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 218				
description					
max length	62.4	max width	13	retouch	
width(quarter)	12.4	thickness(quarter)	3.4	termination	
width(half)	13.5	thickness(half)	4.4	blade part	complete
width(3 quarter)	11	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19763
simple name	blade, unretouched	period	Old Kingdom	size	74.6x9.9x4.2
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 218				
description					
max length	74.6	max width	9.9	retouch	
width(quarter)	9.4	thickness(quarter)	4.2	termination	
width(half)	9.2	thickness(half)	4.2	blade part	proximal
width(3 quarter)	8.5	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19764
simple name	blade, unretouched	period	Old Kingdom	size	43.8x9.5x2.9
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 218				
description					
max length	43.8	max width	9.5	retouch	
width(quarter)	9.3	thickness(quarter)	2.1	termination	
width(half)	9.5	thickness(half)	2.7	blade part	medial
width(3 quarter)	9.4	thickness(3 quarter)	2.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19765
simple name	blade, unretouched	period	Old Kingdom	size	85.8x14x4.6
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 218				
description	Previous hinge fracture.				
max length	85.8	max width	14	retouch	
width(quarter)	14	thickness(quarter)	4.2	termination	
width(half)	12.3	thickness(half)	4.6	blade part	complete
width(3 quarter)	11.9	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19766
simple name	blade, unretouched	period	Old Kingdom	size	60x16.4x4.1
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description	In pencil 'SAND'.				
max length	60	max width	16.4	retouch	
width(quarter)	15.6	thickness(quarter)	3.6	termination	
width(half)	16.4	thickness(half)	4	blade part	complete
width(3 quarter)	13.6	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19767
simple name	blade, unretouched	period	Old Kingdom	size	50.5x11.9x3
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description					
max length	50.5	max width	11.9	retouch	
width(quarter)	11.9	thickness(quarter)	2	termination	
width(half)	9	thickness(half)	2.3	blade part	distal
width(3 quarter)	8.5	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19768
simple name	blade, unretouched	period	Old Kingdom	size	81.7x10.1x3.3
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description					
max length	81.7	max width	10.1	retouch	
width(quarter)	10.1	thickness(quarter)	3.3	termination	
width(half)	9.5	thickness(half)	3.1	blade part	complete
width(3 quarter)	8.7	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19769
simple name	blade, unretouched	period	Old Kingdom	size	60.8x11.9x3.4
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description	In pencil 'A519'.				
max length	60.8	max width	11.9	retouch	
width(quarter)	11.9	thickness(quarter)	3.2	termination	
width(half)	10.2	thickness(half)	3	blade part	distal
width(3 quarter)	9.2	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19770
simple name	blade, unretouched	period	Old Kingdom	size	30.8x12.7x2.5
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description					
max length	30.8	max width	12.7	retouch	
width(quarter)	12	thickness(quarter)	2.2	termination	
width(half)	12.6	thickness(half)	2.4	blade part	medial
width(3 quarter)	12.7	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19771
simple name	blade, unretouched	period	Old Kingdom	size	67.7x13.8x2.6
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description					
max length	67.7	max width	13.8	retouch	
width(quarter)	13.8	thickness(quarter)	2.7	termination	
width(half)	12.2	thickness(half)	2.6	blade part	complete
width(3 quarter)	12	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19772
simple name	blade, unretouched	period	Old Kingdom	size	36x11.4x2.8
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description					
max length	36	max width	11.4	retouch	
width(quarter)	11.4	thickness(quarter)	3.3	termination	
width(half)	11	thickness(half)	2.4	blade part	medial
width(3 quarter)	11	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19773
simple name	blade, unretouched	period	Old Kingdom	size	52.7x10.7x3.2
functional name		colour	light grey-brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	catalogue number 216 B7-1				
description					
max length	52.7	max width	10.7	retouch	
width(quarter)	8	thickness(quarter)	3.5	termination	
width(half)	9	thickness(half)	4	blade part	medial
width(3 quarter)	10.7	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Tarkhan	MUSEUM	Petrie	MUSEUM NO.	UC17013

simple name	scraper, oval	period	Early Dynastic, 1st Dynasty	size	93x64
functional name		colour		shape	
excavation no		house/tomb		context	mastaba 2055

date evidence	
references	Petrie 1914, 8, pl. VI
description	

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Tarkhan	MUSEUM	Petrie	MUSEUM NO.	UC17119

simple name	blade	period	Early Dynastic, 1st Dynasty	size	74
functional name		colour		shape	narrow
excavation no		house/tomb		context	tomb 75

date evidence	
references	Petrie 1913, VII.9, 13
description	

max length	74	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Tarkhan	MUSEUM		MUSEUM NO.	UC17014

simple name	scraper, round	period	Early Dynastic, 1st Dynasty	size	91x82
functional name		colour		shape	
excavation no		house/tomb		context	mastaba 2055

date evidence	
references	Petrie 1914, 8, pl. VI
description	

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE		MUSEUM	Petrie	MUSEUM NO.	UC59563

simple name	?palette	period		size	65.8x48.6x13
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	In museum drawer with writing equipment. Palettes are usually a slightly different shape. This is too blunt to be a razor.

max length	65.8	max width	48.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	13	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Koptos	MUSEUM	Petrie	MUSEUM NO.	UC59564

simple name	?palette	period	Old Kingdom	size	59.5x37.8x6.6
functional name		colour	pink and brown ban	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	In museum drawer with writing equipment. Palettes are usually a slightly different shape. This is too blunt to be a razor. Polished all over.

max length	59.5	max width	37.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456li

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	53.1x17.4x5.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	53.3	max width	17.3	retouch	
width(quarter)	15.1	thickness(quarter)	5.3	termination	
width(half)	16.4	thickness(half)	5.9	blade part	proximal
width(3 quarter)	17.3	thickness(3 quarter)	5	segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xviii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	65x18.2x5.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	65	max width	18.2	retouch	
width(quarter)	16.4	thickness(quarter)	5.4	termination	
width(half)	18.2	thickness(half)	4.7	blade part	proximal
width(3 quarter)	16.2	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxiii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	55.7x10.1x4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	55.7	max width	10.1	retouch	
width(quarter)	10	thickness(quarter)	4	termination	
width(half)	9.5	thickness(half)	3.5	blade part	distal
width(3 quarter)	10.1	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xix
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	56.4x13.2x2.5
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Proximal end squared by steep dorsal retouch.				
max length	56.4	max width	13.4	retouch	
width(quarter)	12.8	thickness(quarter)	2.5	termination	
width(half)	13.2	thickness(half)	2.4	blade part	medial
width(3 quarter)	13.4	thickness(3 quarter)	2.1	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456liii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	45.9x10.4x3.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	45.9	max width	10.4	retouch	
width(quarter)	9.1	thickness(quarter)	2.2	termination	
width(half)	9.7	thickness(half)	2.7	blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxix

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	36.4x13.2x3.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	36.4	max width	13.2	retouch	
width(quarter)	12.5	thickness(quarter)	3.7	termination	
width(half)	13.2	thickness(half)	4.3	blade part	medial
width(3 quarter)	13.2	thickness(3 quarter)	4.7	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456x

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	81x12.2x2.7
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	81	max width	12.2	retouch	
width(quarter)	12	thickness(quarter)	2.7	termination	
width(half)	11.8	thickness(half)	2.7	blade part	complete
width(3 quarter)	12.2	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6556vi

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	80.2x14.7x4.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Pencil mark 'O'.				

max length	80.2	max width	17.3	retouch	
width(quarter)	17.3	thickness(quarter)	3.2	termination	
width(half)	15.6	thickness(half)	4.8	blade part	complete
width(3 quarter)	13.8	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456iii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	80.5x14.7x11.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	80.5	max width	14.7	retouch	
width(quarter)	14.7	thickness(quarter)	3.5	termination	
width(half)	11.9	thickness(half)	4.8	blade part	complete
width(3 quarter)	11.9	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xx

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	67.5x16.7x5.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Proximal end broken, hinge at distal end.				

max length	67.5	max width	16.7	retouch	
width(quarter)	16.7	thickness(quarter)	5.5	termination	
width(half)	15.4	thickness(half)	5.2	blade part	distal
width(3 quarter)	12.1	thickness(3 quarter)	3.7	segmented/truncated	segemented
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xlv
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	49.2x17.6x4.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Proximal end broken, hinge at distal end.				

max length	49.2	max width	17.6	retouch	
width(quarter)	17.6	thickness(quarter)	4.4	termination	
width(half)	17.1	thickness(half)	4.3	blade part	distal
width(3 quarter)	14.6	thickness(3 quarter)	3.8	segmented/truncated	segemented
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xviiib
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	68.5x11.8x3.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	68.5	max width	11.8	retouch	
width(quarter)	10.6	thickness(quarter)	3.6	termination	
width(half)	11.8	thickness(half)	3	blade part	medial
width(3 quarter)	11.8	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xlviii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	50.9x11.8x5.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	50.9	max width	14.7	retouch	
width(quarter)	14.7	thickness(quarter)	5.2	termination	
width(half)	13.6	thickness(half)	5.4	blade part	proximal
width(3 quarter)	14	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456ix

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	85.2x14.9x4.6
functional name			colour	mid brown		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description							

max length	85.2	max width	14.9	retouch			
width(quarter)	14.9	thickness(quarter)	4.6			termination	
width(half)	12.9	thickness(half)	4.1			blade part	complete
width(3 quarter)	8.9	thickness(3 quarter)	3.7			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xl

simple name	blade, crested, left	period	Middle Kingdom, 12th Dynasty			size	35.9x10.6x4.2
functional name			colour	mid-dark brown		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description	Deep ripples on ventral side.						

max length	35.9	max width	11	retouch			
width(quarter)	10.6	thickness(quarter)	4.1			termination	
width(half)	11	thickness(half)	4.2			blade part	medial
width(3 quarter)	10.3	thickness(3 quarter)	3.2			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	76.2x18.2x7.4
functional name			colour	mid brown		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description							

max length	76.2	max width	18.2	retouch			
width(quarter)	17.4	thickness(quarter)	7.4			termination	
width(half)	18.2	thickness(half)	7.4			blade part	proximal
width(3 quarter)	13	thickness(3 quarter)	6			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456viii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	87x15.3x4.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	87	max width	15.3	retouch	
width(quarter)	15.2	thickness(quarter)	4.1	termination	
width(half)	15	thickness(half)	4.4	blade part	complete
width(3 quarter)	15.3	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xlvii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	47x11.7x3.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	47	max width	11.1	retouch	
width(quarter)	11.7	thickness(quarter)	3.3	termination	
width(half)	10.5	thickness(half)	3.9	blade part	proximal
width(3 quarter)	11.1	thickness(3 quarter)	2.9	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xlvi

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	53x14.2x4.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Seep ripples at proximal end and tip of proximal end broken off.				

max length	53	max width	14.2	retouch	
width(quarter)	13	thickness(quarter)	4.2	termination	
width(half)	13.6	thickness(half)	3.7	blade part	proximal
width(3 quarter)	14.2	thickness(3 quarter)	3.7	segmented/truncated	segemented
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456liv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	42.3x13.2x4.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	42.3	max width	13.2	retouch	
width(quarter)	12.6	thickness(quarter)	3.8	termination	
width(half)	12.7	thickness(half)	4.2	blade part	proximal
width(3 quarter)	13.2	thickness(3 quarter)	4.3	segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xiii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	77.8x14.7x6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	77.8	max width	14.7	retouch	
width(quarter)	13.7	thickness(quarter)	5.5	termination	
width(half)	14.7	thickness(half)	5.2	blade part	complete
width(3 quarter)	13.9	thickness(3 quarter)	6	segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxvii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	60.6x6x6.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Steep retouch right.

max length	60.6	max width	6	retouch	
width(quarter)	6	thickness(quarter)	5.9	termination	
width(half)	4.9	thickness(half)	6.3	blade part	distal
width(3 quarter)	3.8	thickness(3 quarter)	4.7	segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456v

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty		size	57.3x13.3x2.9	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	57.3	max width	13.3	retouch			
width(quarter)	13.3	thickness(quarter)	2.7		termination		
width(half)	12.2	thickness(half)	2.9		blade part	distal	
width(3 quarter)	8.9	thickness(3 quarter)	4		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxiv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty		size	58.8x15.2x3.2	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	58.8	max width	15.2	retouch			
width(quarter)	15.2	thickness(quarter)	3		termination		
width(half)	15.2	thickness(half)	3.2		blade part	distal	
width(3 quarter)	13.9	thickness(3 quarter)	2.6		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xvi

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty		size	66.8x14.1x5.5	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	66.8	max width	14.1	retouch			
width(quarter)	14.1	thickness(quarter)	4.7		termination		
width(half)	14.1	thickness(half)	5.5		blade part	proximal	
width(3 quarter)	13.9	thickness(3 quarter)	4.6		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxiv

simple name	blade, crested left	period	Middle Kingdom, 12th Dynasty	size	99.8x16.5x8.1
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	99.8	max width	16.5	retouch	
width(quarter)	13.6	thickness(quarter)	5.7	termination	
width(half)	15.5	thickness(half)	5.7	blade part	complete
width(3 quarter)	16.5	thickness(3 quarter)	8.1	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxvi

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	47.8x17.7x4.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	47.8	max width	17.7	retouch	
width(quarter)	17.7	thickness(quarter)	4.6	termination	
width(half)	15.7	thickness(half)	4.4	blade part	proximal
width(3 quarter)	14.5	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xlii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	43.9x11.6x4.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Deep ripples.				

max length	43.9	max width	11.6	retouch	
width(quarter)	11.6	thickness(quarter)	4.3	termination	
width(half)	11.5	thickness(half)	4.2	blade part	distal
width(3 quarter)	11.4	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456vii

simple name	blade, crested, left	period	Middle Kingdom, 12th Dynasty		size	83.1x16.9x4.6	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	83.1	max width	16.9	retouch			
width(quarter)	16.9	thickness(quarter)	4.6		termination		
width(half)	15.7	thickness(half)	4.3		blade part	complete	
width(3 quarter)	13	thickness(3 quarter)	3.4		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xi

simple name	blade, crested, right	period	Middle Kingdom, 12th Dynasty		size	77.1x7.1x7.8	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	77.1	max width	7.1	retouch			
width(quarter)	7.1	thickness(quarter)	7.4		termination		
width(half)	7	thickness(half)	7.8		blade part	proximal	
width(3 quarter)	6.4	thickness(3 quarter)	7.7		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxviii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty		size	42.5x16x3.2	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	42.5	max width	16	retouch			
width(quarter)	16	thickness(quarter)	3.2		termination		
width(half)	13	thickness(half)	2.3		blade part	proximal	
width(3 quarter)	9.3	thickness(3 quarter)	1.9		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xliv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	48.2x14.4x3.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Deep ripples.				

max length	48.2	max width	14.4	retouch	
width(quarter)	13.8	thickness(quarter)	3.8	termination	
width(half)	14.4	thickness(half)	3.7	blade part	proximal
width(3 quarter)	13.8	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xlix

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	42.5x12.3x2.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	42.5	max width	12.3	retouch	
width(quarter)	11.5	thickness(quarter)	2.3	termination	
width(half)	12.3	thickness(half)	2.4	blade part	proximal
width(3 quarter)	9.8	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456i

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	57.9x12.7x3.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	57.9	max width	12.7	retouch	
width(quarter)	10.6	thickness(quarter)	3.4	termination	
width(half)	12.7	thickness(half)	3.9	blade part	distal
width(3 quarter)	8.4	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxviii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	53.7x17.1x4
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	53.7	max width	17.1	retouch	
width(quarter)	16.7	thickness(quarter)	3.3	termination	
width(half)	17.1	thickness(half)	4	blade part	proximal
width(3 quarter)	17	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxx

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	57.3x21.7x5.2
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	57.3	max width	20	retouch	
width(quarter)	20	thickness(quarter)	4.1	termination	
width(half)	21.7	thickness(half)	5	blade part	proximal
width(3 quarter)	19.5	thickness(3 quarter)	5.2	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456lv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	26.7x12.7x6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	26.7	max width	12.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	12.7	thickness(half)	6	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxiii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	55.7x14.6x5.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	55.7	max width	14.6	retouch	
width(quarter)	14.6	thickness(quarter)	4.4	termination	
width(half)	13	thickness(half)	5.2	blade part	proximal
width(3 quarter)	13.1	thickness(3 quarter)	5.2	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	57.1x11.7x4.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	57.1	max width	11.7	retouch	
width(quarter)	11.7	thickness(quarter)	4	termination	
width(half)	11	thickness(half)	4.3	blade part	proximal
width(3 quarter)	10.3	thickness(3 quarter)	4.6	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456l
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	50.1x15.9x6.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	50.1	max width	16.5	retouch	
width(quarter)	16.5	thickness(quarter)	6.8	termination	
width(half)	15.7	thickness(half)	5.8	blade part	distal
width(3 quarter)	15.9	thickness(3 quarter)	5.7	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxvii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	36.6x12.9x3.7
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	36.6	max width	12.9	retouch	
width(quarter)	11.4	thickness(quarter)	2.7	termination	
width(half)	12.6	thickness(half)	3.7	blade part	proximal
width(3 quarter)	12.9	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	65.5x19.5x3
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	65.5	max width	19.5	retouch	
width(quarter)	19.5	thickness(quarter)	3	termination	
width(half)	19.5	thickness(half)	2.9	blade part	proximal
width(3 quarter)	16.9	thickness(3 quarter)	2.9	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456lii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	51.9x13.9x3.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	51.9	max width	13.9	retouch	
width(quarter)	13.9	thickness(quarter)	2.9	termination	
width(half)	12	thickness(half)	3.2	blade part	medial
width(3 quarter)	11	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	61.7x12.5x3.5
functional name				colour	mid brown	shape	narrow
excavation no				house/tomb		context	

date evidence	
references	
description	

max length	61.7	max width	12.5	retouch			
width(quarter)	12.5	thickness(quarter)	3.3			termination	
width(half)	11.8	thickness(half)	3.5			blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	2.9			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xiv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	81.4x13x5.6
functional name				colour	mid brown	shape	narrow
excavation no				house/tomb		context	

date evidence	
references	
description	Previous hinge fracture.

max length	81.4	max width	13	retouch			
width(quarter)	12.6	thickness(quarter)	4.6			termination	
width(half)	13	thickness(half)	5.4			blade part	complete
width(3 quarter)	11	thickness(3 quarter)	5.6			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456iv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	80x13x4.1
functional name				colour	mid brown	shape	narrow
excavation no				house/tomb		context	

date evidence	
references	
description	Previous hinge fracture.

max length	80	max width	13	retouch			
width(quarter)	13	thickness(quarter)	3.4			termination	
width(half)	11.5	thickness(half)	4.1			blade part	complete
width(3 quarter)	11.6	thickness(3 quarter)	4			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	66x13.1x4.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Previous hinge fracture.				

max length	66	max width	13.1	retouch	
width(quarter)	13.1	thickness(quarter)	4.3	termination	
width(half)	13	thickness(half)	4.9	blade part	distal
width(3 quarter)	11.7	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxi

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	58.1x20.7x4.3
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	58.1	max width	20.4	retouch	
width(quarter)	20.4	thickness(quarter)	3.7	termination	
width(half)	17.7	thickness(half)	3.5	blade part	proximal
width(3 quarter)	16.1	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxix

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	60.2x21.3x3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	60.2	max width	21.3	retouch	
width(quarter)	21.3	thickness(quarter)	2.5	termination	
width(half)	18.3	thickness(half)	2.8	blade part	proximal
width(3 quarter)	12.6	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxi

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	55.9x8.7x2.5
functional name			colour	mid brown		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description	Irregular retouch dorsal left.						
max length	55.9	max width	8.7	retouch			
width(quarter)	8.7	thickness(quarter)	2.4			termination	
width(half)	8.7	thickness(half)	2.5			blade part	medial
width(3 quarter)	7.4	thickness(3 quarter)	2.3			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	71.7x12.8x2.5
functional name			colour	mid brown		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description							
max length	71.7	max width	12.8	retouch			
width(quarter)	12.8	thickness(quarter)	4.8			termination	
width(half)	11.3	thickness(half)	5.2			blade part	distal
width(3 quarter)	15	thickness(3 quarter)	6.3			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456ii

simple name	blade, crested right	period	Middle Kingdom, 12th Dynasty			size	65.8x15.2x6.2
functional name			colour	mid brown		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description	Slight lip, crested right.						
max length	65.8	max width	15.2	retouch			
width(quarter)	14.6	thickness(quarter)	6			termination	
width(half)	15.2	thickness(half)	6.2			blade part	proximal
width(3 quarter)	9	thickness(3 quarter)	4.7			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xliii
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	49.8x14x5.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	49.8	max width	14	retouch	
width(quarter)	13	thickness(quarter)	4	termination	
width(half)	12.7	thickness(half)	5.2	blade part	medial
width(3 quarter)	14	thickness(3 quarter)	5.1	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xxxvi
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	43.4x17.5x4.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	43.4	max width	17.5	retouch	
width(quarter)	17	thickness(quarter)	4.5	termination	
width(half)	17.5	thickness(half)	4.4	blade part	proximal
width(3 quarter)	16.8	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6456xli
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	43.1x12.8x3.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	43.1	max width	12.8	retouch	
width(quarter)	12	thickness(quarter)	3.2	termination	
width(half)	11.6	thickness(half)	3.1	blade part	proximal
width(3 quarter)	12.8	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454xii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	18.5x15.4x6.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Rough dorsal and ventral retouch right and left toward proximal end.

max length	85	max width	15.4	retouch	
width(quarter)	15.4	thickness(quarter)	5.4	termination	
width(half)	14.3	thickness(half)	6.3	blade part	complete
width(3 quarter)	13.5	thickness(3 quarter)	5.8	segmented/truncated	

wear

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454viii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	65.2x12.6x4.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Rough dorsal left and ventral left retouch.

max length	65.2	max width	12.6	retouch	
width(quarter)	12.6	thickness(quarter)	3.4	termination	
width(half)	11.1	thickness(half)	4.6	blade part	distal
width(3 quarter)	8	thickness(3 quarter)	4.9	segmented/truncated	

wear

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454v

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	48.4x17.1x3
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description: Rough retouch ventral one side.

max length	48.4	max width	17.1	retouch	
width(quarter)	16.5	thickness(quarter)	2.6	termination	
width(half)	17.1	thickness(half)	3	blade part	medial
width(3 quarter)	14.9	thickness(3 quarter)	2.9	segmented/truncated	

wear

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454x

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	57.5x18.3x4.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Rough retouch dorsal right.

max length	57.5	max width	18.3	retouch	
width(quarter)	18.3	thickness(quarter)	4.5	termination	
width(half)	17.8	thickness(half)	4.6	blade part	complete
width(3 quarter)	15.2	thickness(3 quarter)	3.3	segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454i

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	41.3x11x4.1
functional name		colour	dark brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Denticulation ventral one side.

max length	41.3	max width	11	retouch	
width(quarter)	11	thickness(quarter)	4.1	termination	
width(half)	11	thickness(half)	3.8	blade part	medial
width(3 quarter)	9.2	thickness(3 quarter)	3.5	segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454xi

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	76.2x18.6x4.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence	
references	
description	Rough retouch ventral right.

max length	76.2	max width	18.6	retouch	
width(quarter)	18.6	thickness(quarter)	4.8	termination	
width(half)	17.7	thickness(half)	4.7	blade part	distal
width(3 quarter)	17.3	thickness(3 quarter)	4.5	segmented/truncated	

wear	gloss mainly dorsal right and some ventral left

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454ix

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	53.3x16.2x4.1
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Retouch ventral right.				

max length	53.3	max width	16.2	retouch	
width(quarter)	16.2	thickness(quarter)	3.3	termination	
width(half)	15.7	thickness(half)	3.4	blade part	distal
width(3 quarter)	15.7	thickness(3 quarter)	4.1	segmented/truncated	
wear	gloss ventral right				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454vi

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	50.5x14.6x4.2
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Retouch ventral both edges.				

max length	50.5	max width	14.6	retouch	
width(quarter)	13.2	thickness(quarter)	3.5	termination	
width(half)	14.1	thickness(half)	4	blade part	medial
width(3 quarter)	14.6	thickness(3 quarter)	4.2	segmented/truncated	
wear	gloss ventral right				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454ii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	63.9x13.2x5.1
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Denticulation dorsal and ventral on one side and backed opposite lateral edge.				

max length	63.9	max width	13.2	retouch	
width(quarter)	13.2	thickness(quarter)	5	termination	
width(half)	13	thickness(half)	5.1	blade part	medial
width(3 quarter)	11.6	thickness(3 quarter)	4.8	segmented/truncated	
wear	gloss mainly dorsal one edge, some ventral				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454iv

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	44x16.3x3
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Retouch ventral right.

max length	44	max width	16.3	retouch	
width(quarter)	14.3	thickness(quarter)	3	termination	
width(half)	15.9	thickness(half)	3	blade part	medial
width(3 quarter)	16.3	thickness(3 quarter)	2.9	segmented/truncated	

wear

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454ivb

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	62.2x13.7x3.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Retouch ventral one edge.

max length	62.2	max width	13.7	retouch	
width(quarter)	12.5	thickness(quarter)	3.3	termination	
width(half)	13	thickness(half)	2.8	blade part	medial
width(3 quarter)	13.7	thickness(3 quarter)	2.9	segmented/truncated	

wear

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454vii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	54.2x11.2x3.7
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: Retouch dorsal one edge.

max length	54.2	max width	11.2	retouch	
width(quarter)	11.2	thickness(quarter)	3.7	termination	
width(half)	10.9	thickness(half)	3.4	blade part	distal
width(3 quarter)	11	thickness(3 quarter)	3	segmented/truncated	

wear

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6454 iii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty			size	60.2x10.3x2.7
functional name			colour	mid brown		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	
description	Denticulation ventral one side.

max length	60.2	max width	10.3	retouch			
width(quarter)	10.2	thickness(quarter)	2.6			termination	
width(half)	10	thickness(half)	2.7			blade part	medial
width(3 quarter)	10.3	thickness(3 quarter)	2.7			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458v

simple name	blade, retouched,lateral	period	Middle Kingdom, 12th Dynasty			size	51x13.8x3
functional name			colour	light brown		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	
description	Retouch ventral both edges, one end facetted retouch.

max length	51	max width	13.8	retouch			
width(quarter)	13.1	thickness(quarter)	3			termination	
width(half)	13.8	thickness(half)	2.9			blade part	medial
width(3 quarter)	12.7	thickness(3 quarter)	3			segmented/truncated	

wear	gloss dorsal and ventral

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458xiii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty			size	40.2x19x5.2
functional name			colour	mid brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Rough retouch ventral one side.

max length	40.2	max width	19	retouch			
width(quarter)	17.8	thickness(quarter)	4.4			termination	
width(half)	18.5	thickness(half)	4.9			blade part	medial
width(3 quarter)	19	thickness(3 quarter)	5.2			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458xiv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	42.4x18.6x5.3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	42.4	max width	18.6	retouch	
width(quarter)	18.6	thickness(quarter)	5.3	termination	
width(half)	14.7	thickness(half)	5.2	blade part	distal
width(3 quarter)	13	thickness(3 quarter)	4.6	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458iv

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	51.5x15.1x3.5
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Irregular retouch dorsal and ventral one edge.				

max length	51.5	max width	15.1	retouch	
width(quarter)	15.1	thickness(quarter)	3	termination	
width(half)	12.7	thickness(half)	3.2	blade part	medial
width(3 quarter)	12.9	thickness(3 quarter)	3.5	segmented/truncated	
wear	gloss dorsal and ventral				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458vi

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	62.2x12.5x3.7
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Deticulation dorsal and ventral, one edge.				

max length	62.2	max width	12.5	retouch	
width(quarter)	12.5	thickness(quarter)	3.3	termination	
width(half)	12	thickness(half)	3.4	blade part	medial
width(3 quarter)	10.8	thickness(3 quarter)	3.7	segmented/truncated	
wear	gloss mainly dorsal some ventral				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458i

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty		size	46.9x14.5x5.5	
functional name	sickle		colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description	Rough retouch dorsal and ventral one edge.						

max length	46.9	max width	14.5	retouch			
width(quarter)	14.5	thickness(quarter)	5.5		termination		
width(half)	13.8	thickness(half)	5.2		blade part	distal	
width(3 quarter)	11.3	thickness(3 quarter)	3.9		segmented/truncated		
wear	gloss dorsal one edge						

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458x

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty		size	57.2x13.6x4	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description	Rough retouch ventral right.						

max length	57.2	max width	13.6	retouch			
width(quarter)	11.7	thickness(quarter)	4		termination		
width(half)	12.8	thickness(half)	4		blade part	proximal	
width(3 quarter)	13.6	thickness(3 quarter)	3.7		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458xi

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty		size	55.8x15.5x4	
functional name			colour	mid brown	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description	Rough retouch dorsal right.						

max length	55.8	max width	15.5	retouch			
width(quarter)	14.7	thickness(quarter)	3.7		termination		
width(half)	15.5	thickness(half)	4		blade part	proximal	
width(3 quarter)	12.2	thickness(3 quarter)	3.4		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458ix

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	63.1x12.5x4.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Denticulation ventral one edge and both ends facetted retouch.				

max length	63.1	max width	11.4	retouch	
width(quarter)	10.3	thickness(quarter)	3.8	termination	
width(half)	11.4	thickness(half)	4.5	blade part	medial
width(3 quarter)	12.5	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458xii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	56.3x14.1x4.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	56.3	max width	14.1	retouch	
width(quarter)	14.1	thickness(quarter)	4.6	termination	
width(half)	13.7	thickness(half)	4.6	blade part	proximal
width(3 quarter)	13.5	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458ii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	56.8x13.4x4.9
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Denticulation ventral one edge.				

max length	56.8	max width	13.4	retouch	
width(quarter)	11	thickness(quarter)	4.9	termination	
width(half)	13.4	thickness(half)	4.6	blade part	medial
width(3 quarter)	12.7	thickness(3 quarter)	3.9	segmented/truncated	
wear	gloss mainly ventral, some dorsal				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458viii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	56.4x17x4.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	56.4	max width	17	retouch	
width(quarter)	17	thickness(quarter)	4	termination	
width(half)	15.4	thickness(half)	4.3	blade part	distal
width(3 quarter)	11.7	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458iii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	49.6x13.3x3.2
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Denticulation ventral one edge.				

max length	49.6	max width	13.3	retouch	
width(quarter)	13.3	thickness(quarter)	2.8	termination	
width(half)	12.4	thickness(half)	3.2	blade part	medial
width(3 quarter)	12.3	thickness(3 quarter)	3	segmented/truncated	
wear	gloss mainly dorsal, some ventral				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6458vii

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	60.6x17.4x4.8
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Denticulation ventral one edge and steep retouch other edge.				

max length	60.6	max width	17.4	retouch	
width(quarter)	15.3	thickness(quarter)	4.8	termination	
width(half)	17.4	thickness(half)	4.5	blade part	medial
width(3 quarter)	14.6	thickness(3 quarter)	4.1	segmented/truncated	
wear	gloss dorsal				

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455viii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	72.3x15.7x6
functional name			colour	mid grey		shape	irregular
excavation no			house/tomb			context	

date evidence	
references	
description	

max length	72.3	max width	17.7	retouch			
width(quarter)	12.5	thickness(quarter)	6			termination	
width(half)	15.7	thickness(half)	4.8			blade part	distal
width(3 quarter)	17.7	thickness(3 quarter)	4.1			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455v

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	53x15.8x3.5
functional name			colour	mid grey		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	
description	

max length	53	max width	15.8	retouch			
width(quarter)	15.1	thickness(quarter)	3.1			termination	
width(half)	14.4	thickness(half)	3.3			blade part	proximal
width(3 quarter)	15.8	thickness(3 quarter)	3.5			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455i

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty			size	38.3x12x4.2
functional name	sickle		colour	mid grey		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Denticulation ventral one edge.

max length	38.3	max width	12	retouch			
width(quarter)	12	thickness(quarter)	3.1			termination	
width(half)	10.4	thickness(half)	3.7			blade part	distal
width(3 quarter)	9	thickness(3 quarter)	4.2			segmented/truncated	

wear	gloss mainly dorsal some ventral one edge

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455iii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	50.1x13.7x4.5
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	50.1	max width	13.7	retouch	
width(quarter)	13.2	thickness(quarter)	3.9	termination	
width(half)	13.7	thickness(half)	3.9	blade part	medial
width(3 quarter)	11	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455iv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	51.1x15.3x3
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51.1	max width	12.8	retouch	
width(quarter)	15.3	thickness(quarter)	3	termination	
width(half)	14.7	thickness(half)	2.7	blade part	proximal
width(3 quarter)	12.8	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455vii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	56.1x17x4.2
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Deep ripples.				

max length	56.1	max width	17	retouch	
width(quarter)	17	thickness(quarter)	4.2	termination	
width(half)	15.3	thickness(half)	3.5	blade part	proximal
width(3 quarter)	11	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455vi

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty		size	65.7x13.6x3.7	
functional name			colour	mid grey	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	65.7	max width	13.6	retouch			
width(quarter)	13.3	thickness(quarter)	3.2		termination		
width(half)	13.6	thickness(half)	3.7		blade part	proximal	
width(3 quarter)	13	thickness(3 quarter)	3.5		segmented/truncated		
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6455ii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty		size	35.2x11x3.3	
functional name			colour	mid grey	shape	narrow	
excavation no			house/tomb		context		
date evidence							
references							
description							
max length	35.2	max width	11	retouch			
width(quarter)	10.4	thickness(quarter)	3.1		termination		
width(half)	11	thickness(half)	3		blade part	medial	
width(3 quarter)	11	thickness(3 quarter)	3.3		segmented/truncated		
wear							

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7564

simple name	knife, MKU	period	Middle Kingdom, 12th Dynasty		size	97.6x37.4x9.2	
functional name			colour	light-mid brown	shape		
excavation no			house/tomb		context		
date evidence							
references	Petrie 1891, 12, pl. VII, 10						
description	Rough bifacial knife, sinious edge on profile, flatter on one side than other.						
max length	97.6	max width	37.4	retouch			
width(quarter)		thickness(quarter)			termination		
width(half)		thickness(half)	9.2		blade part		
width(3 quarter)		thickness(3 quarter)			segmented/truncated		
wear							

PLACE	Abydos	MUSEUM	Petrie	MUSEUM NO.	UC16216

simple name	knife, type 4	period	Early Dynastic, 1st Dynasty	size	160x31.5x6.9
functional name		colour	pale brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial knife. Blade 'sharpened' with point away from user, handle 'harpened' with point to user. Straight edge on profile. Curved one side, flat other. ‘Seitbezogenheit’

max length	160	max width	31.5	retouch			
width(quarter)	31.5	thickness(quarter)	5.8			termination	
width(half)	26.9	thickness(half)	6.9			blade part	
width(3 quarter)	28.5	thickness(3 quarter)	6.8			segmented/truncated	

wear

PLACE	Meydum	MUSEUM	Petrie	MUSEUM NO.	UC17591

simple name	flake, retouched	period	Early Dynastic, 4th Dynasty	size	76x37.5x6.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Marked '...false door'. Scraper?

max length	76	max width	37.5	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.1			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7331

simple name	knife?	period	Middle Kingdom, 12th Dynasty	size	76.7x34.6x11.2
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Flint nodule worked bifacial like a small, illformed knife.

max length	76.7	max width	34.6	retouch			
width(quarter)		thickness(quarter)	17.5			termination	
width(half)		thickness(half)	11.2			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC16738

simple name	axe	period	Middle Kingdom, 12th Dynasty	size	127x19.4x21.5
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Two lugged axe.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Petrie	MUSEUM NO.	UC16214i

simple name	razor blade, round ends	period	Early Dynastic, 1st Dynasty	size	63.7x34.9x5.2
functional name		colour	pale brown	shape	broad
excavation no		house/tomb		context	

date evidence

references

description Round ends. Marked 32 660.

max length	63.7	max width	34.9	retouch	
width(quarter)	34.2	thickness(quarter)	4.3	termination	
width(half)	34.9	thickness(half)	5.2	blade part	
width(3 quarter)	33.8	thickness(3 quarter)	4.6	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Petrie	MUSEUM NO.	UC16214ii

simple name	razor blade, round ends	period	Early Dynastic, 1st Dynasty	size	61.7x32.4x6.1
functional name		colour	pale brown	shape	broad
excavation no		house/tomb		context	

date evidence

references

description Round ends. Marked 22 66.

max length	61.7	max width	32.4	retouch	
width(quarter)	30.5	thickness(quarter)	5.3	termination	
width(half)	31.6	thickness(half)	6.1	blade part	
width(3 quarter)	32.4	thickness(3 quarter)	6.1	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Petrie	MUSEUM NO.	UC16214iii

simple name	razor blade, round ends	period	Early Dynastic, 1st Dynasty	size	64.6x29.1x7.4
functional name		colour	pale brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Round ends. Marked 22 66.				

max length	64.6	max width	29.1	retouch	
width(quarter)	28.8	thickness(quarter)	7	termination	
width(half)	29.1	thickness(half)	7.4	blade part	
width(3 quarter)	29	thickness(3 quarter)	7.4	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Petrie	MUSEUM NO.	UC16214iv

simple name	blade, uretouched	period	Early Dynastic, 1st Dynasty	size	
functional name		colour		shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked 22 66.				

max length	80.8	max width	11.8	retouch	
width(quarter)	11.8	thickness(quarter)		termination	
width(half)	11	thickness(half)	3	blade part	complete
width(3 quarter)	11.5	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Gizeh	MUSEUM	Petrie	MUSEUM NO.	UC27388

simple name	flake, retouched	period	Early Dynastic, 1st-3rd Dynasty	size	
functional name		colour	pale brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie et al. 1907				
description	Flake with numbers pained on. Retouched around 3 sides. Non invasive steep retouch.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Petrie	MUSEUM NO.	UC16205

simple name	knife, OK2	period	Early Dynastic, 1st Dynasty	size	250.3
functional name		colour	pale brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	250	max width		retouch	
width(quarter)		thickness(quarter)	5.9	termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)	7	segmented/truncated	

wear	

PLACE	Tarkhan	MUSEUM	Petrie	MUSEUM NO.	UC17094

simple name	bracelet	period	Early Dynastic, 1st Dynasty	size	64
functional name		colour		shape	
excavation no		house/tomb		context	tomb 60

date evidence	
references	Petrie et al. 1913, 11, pl XXXIX
description	Diameter 64mm.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Tarkhan	MUSEUM	Petrie	MUSEUM NO.	UC17087

simple name	razor, round	period	Early Dynastic	size	56.8x21.5x5.6
functional name		colour	mid-dark brown	shape	broad
excavation no		house/tomb		context	mastaba 1060

date evidence	
references	Petrie et al. 1913, 16, pl. XIX 6.
description	Marked 1060 Mastaba of Senor. Rounded ends. This is one of the longer razors.

max length	56.8	max width	21.5	retouch	
width(quarter)	21.5	thickness(quarter)	5.6	termination	
width(half)	19.5	thickness(half)	5	blade part	
width(3 quarter)	19.1	thickness(3 quarter)	4.5	segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC18643

simple name	axe, MK3	period	Middle Kingdom, 12th Dynasty	size	149x108.4x21.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Engelbach and Gunn 1923, 11, pl. VII..				
description	Slight curve in profile.				

max length	149	max width	99.4	retouch	
width(quarter)		thickness(quarter)	21.7	termination	
width(half)		thickness(half)	17.6	blade part	
width(3 quarter)	20.4	thickness(3 quarter)		segmented/truncated	
wear	both sides				

PLACE	Tarkhan	MUSEUM	Petrie	MUSEUM NO.	UC17048

simple name	scraper, leaf shaped	period	Early Dynastic	size	103.4x65x8.5
functional name		colour	pale brown	shape	
excavation no		house/tomb		context	mastaba 1054
date evidence					
references					
description	Marked 1054.				

max length	103	max width	65	retouch	
width(quarter)		thickness(quarter)	8.5	termination	
width(half)		thickness(half)	5.8	blade part	
width(3 quarter)		thickness(3 quarter)	8.2	segmented/truncated	
wear					

PLACE	?	MUSEUM	Petrie	MUSEUM NO.	UC10896

simple name	axe	period	New Kingdom, 19th Dynasty	size	66.4x36.2x11.7
functional name		colour	red brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked 293.				

max length	66.4	max width	36.3	retouch	
width(quarter)		thickness(quarter)	12	termination	
width(half)		thickness(half)	11.7	blade part	
width(3 quarter)		thickness(3 quarter)	10.8	segmented/truncated	
wear	part polished				

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC19751

simple name	knife, OK5 or 6	period	Old Kingdom	size	66.6x38.2x6.2
functional name		colour	pale-mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Marked '10/FEB' B5-1. Handle sharpened with point toward user Positive Seitenbezogenheit. The handle suggests a type 5 or 6.

max length	66.6	max width	38.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7566i

simple name	knife, MK1	period	Middle Kingdom, 12th Dynasty	size	153.1x47.2x8.2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: No sharpening, straight edge on profile.

max length	153	max width	47.2	retouch	
width(quarter)		thickness(quarter)	6.6	termination	
width(half)		thickness(half)	8.2	blade part	
width(3 quarter)		thickness(3 quarter)	8.1	segmented/truncated	

wear

PLACE	El Kab	MUSEUM	Petrie	MUSEUM NO.	UC15071i

simple name	blade, unretouched	period	Old Kingdom	size	111.2x16.4x5.7
functional name		colour	mid brown	shape	narrow
excavation no	marked 141, from mastab	house/tomb		context	

date evidence

references

description: Complete unretouched blade.

max length	111	max width	16.4	retouch	
width(quarter)	15.7	thickness(quarter)	4.2	termination	
width(half)	16.4	thickness(half)	4.8	blade part	complete
width(3 quarter)	15	thickness(3 quarter)	5.7	segmented/truncated	

wear

PLACE	El Kab	MUSEUM	Petrie	MUSEUM NO.	UC15071ii

simple name	blade, unretouched	period	Old Kingdom	size	96.5x18.1x6
functional name		colour	mid brown	shape	narrow
excavation no	marked 141, from mastab	house/tomb		context	
date evidence					
references					
description	Complete unretouched blade.				

max length	96.5	max width	18.1	retouch	
width(quarter)	18.1	thickness(quarter)	4.1	termination	
width(half)	16.5	thickness(half)	4	blade part	complete
width(3 quarter)	15.7	thickness(3 quarter)	6	segmented/truncated	
wear					

PLACE	El Kab	MUSEUM	Petrie	MUSEUM NO.	UC15071iii

simple name	blade, unretouched	period	Old Kingdom	size	92x16.7x3.7
functional name		colour	mid brown	shape	narrow
excavation no	marked 141, from mastab	house/tomb		context	
date evidence					
references					
description	Complete unretouched blade.				

max length	92	max width	16.7	retouch	
width(quarter)	16.7	thickness(quarter)	3.5	termination	
width(half)	15.3	thickness(half)	3.7	blade part	complete
width(3 quarter)	11.7	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	El Kab	MUSEUM	Petrie	MUSEUM NO.	UC15071iv

simple name	blade, unretouched	period	Old Kingdom	size	84.5x18.5x4.4
functional name		colour	mid brown	shape	narrow
excavation no	marked 141, from mastab	house/tomb		context	
date evidence					
references					
description	Complete unretouched blade.				

max length	84.5	max width	18.5	retouch	
width(quarter)	17.2	thickness(quarter)	3.2	termination	
width(half)	18.5	thickness(half)	4.4	blade part	complete
width(3 quarter)	15.5	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	El Kab	MUSEUM	Petrie	MUSEUM NO.	UC15071v

simple name	blade, unretouched	period	Old Kingdom			size	73.1x16.7x3.2
functional name			colour	mid brown		shape	narrow
excavation no	mastaba 141 or 241		house/tomb			context	
date evidence							
references							
description	Complete unretouched blade.						

max length	73.1	max width	16.7	retouch			
width(quarter)	16.7	thickness(quarter)	2.7			termination	
width(half)	15.4	thickness(half)	3.2			blade part	complete
width(3 quarter)	12.9	thickness(3 quarter)	2.7			segmented/truncated	
wear							

PLACE	El Kab	MUSEUM	Petrie	MUSEUM NO.	UC15071vi

simple name	razor, round/intermediate	period	Old Kingdom			size	69.2x19.2x7.3
functional name	Intermediate		colour	mid brown		shape	broad
excavation no	marked 141, from mastab		house/tomb			context	
date evidence							
references							
description	Round ended razor blade suggesting it is no later than the 2nd Dynasty. This is quite long for a razor.						

max length	69.2	max width	20	retouch			
width(quarter)	18.9	thickness(quarter)	5.6			termination	
width(half)	19.2	thickness(half)	7.2			blade part	
width(3 quarter)	20	thickness(3 quarter)	7.3			segmented/truncated	
wear							

PLACE	Pithom	MUSEUM	Petrie	MUSEUM NO.	UC74323i

simple name	blade, unretouched	period	Late Period			size	
functional name			colour	transluscent mid br		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description							

max length	65.4	max width	12.5	retouch			
width(quarter)	12.5	thickness(quarter)	3.2			termination	
width(half)	12.5	thickness(half)	3.2			blade part	proximal
width(3 quarter)	11.6	thickness(3 quarter)	2.7			segmented/truncated	
wear							

PLACE	Pithom	MUSEUM	Petrie	MUSEUM NO.	UC74323ii
simple name	blade, unretouched	period	Late Period	size	
functional name		colour	transluscent mid br	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	52.3	max width	12.7	retouch	
width(quarter)	12.6	thickness(quarter)	2.4	termination	
width(half)	12.7	thickness(half)	2.2	blade part	proximal
width(3 quarter)	10.1	thickness(3 quarter)	2.1	segmented/truncated	
wear					

PLACE	Pithom	MUSEUM	Petrie	MUSEUM NO.	UC74323iii
simple name	blade, unretouched	period	Late Period	size	
functional name		colour	transluscent mid br	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	50.1	max width	14	retouch	
width(quarter)	14	thickness(quarter)	6	termination	
width(half)	14	thickness(half)	6.5	blade part	proximal
width(3 quarter)	12	thickness(3 quarter)	6.2	segmented/truncated	
wear					

PLACE	Pithom	MUSEUM	Petrie	MUSEUM NO.	UC74323iv
simple name	blade, unretouched	period	Late Period	size	
functional name		colour	transluscent mid br	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Hinge fracture at distal end.				
max length	38.5	max width	12.7	retouch	
width(quarter)	11	thickness(quarter)	3.5	termination	
width(half)	12.7	thickness(half)	2.9	blade part	proximal
width(3 quarter)	12.6	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Pithom	MUSEUM	Petrie	MUSEUM NO.	UC74323v

simple name	blade, unretouched	period	Late Period			size	
functional name			colour	transluscent mid br		shape	narrow
excavation no			house/tomb			context	

date evidence	
references	
description	

max length	34.8	max width	15.4	retouch			
width(quarter)	15.4	thickness(quarter)	3.2			termination	
width(half)	15.2	thickness(half)	2.9			blade part	proximal
width(3 quarter)	15.1	thickness(3 quarter)	2.5			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457ii

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty			size	88.4x36.2x7
functional name			colour	light-mid brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Blade edge sharpened as though pointing away. Seitenbezogenheit.

max length	88.4	max width	36.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	7			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457iii

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty			size	67x35.3x5.8
functional name			colour	light-mid brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Blade edge sharpened. Seitenbezogenheit.

max length	67	max width	35.3	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.8			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457i

simple name	knife, fragement	period	Middle Kingdom, 12th Dynasty	size	68.6x40.7x7.1
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade edge sharpened as though pointing away. Seitenbezogenheit.				

max length	68.6	max width	40.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457iv

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	51.1x40.9x4.4
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51.1	max width	40.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457vi

simple name	core, blade	period	Middle Kingdom, 12th Dynasty	size	36.8x26.5x8.9
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Unidirectional core for blade manufacture.				

max length	36.8	max width	26.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457vii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	36.4x17.8x3.8
functional name			colour	mid-light brown		shape	narrow
excavation no			house/tomb			context	
date evidence							
references							
description							
max length	36.4	max width	17.8	retouch			
width(quarter)	17.5	thickness(quarter)	3.8			termination	
width(half)	17.8	thickness(half)	3.2			blade part	proximal
width(3 quarter)	16.5	thickness(3 quarter)	3.2			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457vix

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty			size	23x18.2x5.1
functional name			colour	mid-light brown		shape	
excavation no			house/tomb			context	
date evidence							
references							
description							
max length	23	max width	18.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.1			blade part	proximal
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457viii

simple name	debitage	period	Middle Kingdom, 12th Dynasty			size	38.3x16.9x5.3
functional name			colour			shape	
excavation no			house/tomb			context	
date evidence							
references							
description							
max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6457v

simple name	knife blade	period	Middle Kingdom, 12th Dynasty	size	39.6x25.2x4.5
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpened both side.

max length	39.6	max width	25.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7568i

simple name	knife,OK9 or MK3	period	Middle Kingdom, 12th Dynasty	size	115x41x7
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Sharpened with blade pointing away and handle toward user. '28' marked on one side and 36M2 in pencil Positive Seitenbezogenheit

max length	115	max width	41	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	complete
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC7589

simple name	blade knife	period	Third Intermediate PeriodDyna	size	136x32x12.8
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	136	max width	32	retouch	
width(quarter)	27.8	thickness(quarter)	15	termination	
width(half)	32	thickness(half)	12.8	blade part	
width(3 quarter)	27.3	thickness(3 quarter)	8.8	segmented/truncated	

wear	

PLACE	Qau	MUSEUM	Petrie	MUSEUM NO.	UC27362

simple name	knife blade	period	Early Dynastic, Dynasty 2	size	39.1x36x5.8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Marked '100' in pencil. Top of ripple blade. Polished and serrated one side and pippled the other. Very fine serrations. Symetrical profile

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Gurob	MUSEUM	Petrie	MUSEUM NO.	UC27735v

simple name	flake, retouched	period	New Kingdom, 18th Dynasty	size	61.2x49.8x62
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Shallow retouch along one dorsal edge. pencil writing broke through so modern break.

max length	61.2	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Gurob	MUSEUM	Petrie	MUSEUM NO.	UC27735i

simple name	blade/flake, retouched	period	New Kingdom, 18th Dynasty	size	97.4x41.7x9.5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Large blade, possibly a crude knife. The thicker end could be interpreted as the handle end and sharpening to the blade is carried out as with more conventional knife shapes, with the point away from the sharpener.

max length	97.4	max width	41.7	retouch	
width(quarter)	35.9	thickness(quarter)	9.5	termination	
width(half)	41.7	thickness(half)	6.5	blade part	
width(3 quarter)	35.8	thickness(3 quarter)	6.6	segmented/truncated	

wear

PLACE	Gurob	MUSEUM	Petrie	MUSEUM NO.	UC27735ii

simple name	blade/flake, retouched	period	New Kingdom, 18th Dynasty	size	82.4x38.3x38.2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Large retouched blade. Some retouch ventral but most dorsal.

max length	82.4	max width	38.3	retouch	
width(quarter)	38.3	thickness(quarter)	34.8	termination	
width(half)	38.2	thickness(half)	38.2	blade part	
width(3 quarter)	28.4	thickness(3 quarter)	30.8	segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38226(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	76.8x41.6x8.3
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial knife.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38227(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	66.6x33.2x7
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial knife.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38228(250)
simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	81.1x26.1x6.5
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial knife.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38229(250)
simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	67.1x34x7.2
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial knife.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38298a(251)
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	57.4x17.5x6
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade.				

max length	57.4	max width	17.5	retouch	
width(quarter)	16.7	thickness(quarter)	4.6	termination	
width(half)	15.6	thickness(half)	4.2	blade part	proximal
width(3 quarter)	6	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38299(251)

simple name	flake	period	Middle Kingdom, 12th Dynasty	size	54.4x28.2x4.2
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Flake.

max length	54.4	max width	28.2	retouch	
width(quarter)	25	thickness(quarter)	3.2	termination	
width(half)	28.2	thickness(half)	4.2	blade part	complete
width(3 quarter)	28.2	thickness(3 quarter)	3.7	segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38300(251)

simple name	blade, unretouched	period	Middle kingdom, 12th Dynasty	size	71.7x17.5x4.7
functional name		colour		shape	
excavation no		house/tomb		context	

date evidence

references

description Blade.

max length	71.7	max width	18.4	retouch	
width(quarter)	17.5	thickness(quarter)	4.3	termination	
width(half)	18.4	thickness(half)	4.7	blade part	complete
width(3 quarter)	15.4	thickness(3 quarter)	3.7	segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38301(251)

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	33.4x19.7x3.9
functional name		colour	mid grey brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Blade.

max length	33.4	max width	19.7	retouch	
width(quarter)	19	thickness(quarter)	3.9	termination	
width(half)	19.7	thickness(half)	3.8	blade part	proximal
width(3 quarter)		thickness(3 quarter)	4.3	segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38302(251)

simple name	flake	period	Middle Kingdom, 12th Dynasty	size	90.2x49.6x8.4
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	

date evidence

references

description: Flake, invasive retouch on dorsal side.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38303(251)

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	67.6x40x6.2
functional name		colour	mid brown, banded	shape	
excavation no		house/tomb		context	

date evidence

references

description: Blade, broad.

max length	67.6	max width	40	retouch	
width(quarter)	39.2	thickness(quarter)	6	termination	
width(half)	37.2	thickness(half)	6.2	blade part	complete
width(3 quarter)	22.8	thickness(3 quarter)	6.8	segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38306(251)

simple name	knife fragment?	period	Middle Kingdom, 12th Dynasty	size	65.8x28.9x6
functional name		colour	light mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife tip?

max length	65.8	max width	28.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchaster	MUSEUM NO.	M38307(251)

simple name	knife fragment reused?	period	Middle Kingdom, 12th Dynasty	size	44.7x32.5x6.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Reused knife fragment.				

max length	44.7	max width	32.5	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.7			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38305(251)

simple name	knife fragment?	period	Middle Kingdom, 12th Dynasty	size	37.6
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife tip?				

max length	37.6	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	10.3			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38304(251)

simple name	axe sharpening fragment	period	Middle Kingdom, 12th Dynasty	size	79.4x29.5x12.3
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Axe sharpening fragment.				

max length	79.4	max width	29.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	12.3			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M239
simple name	knife, MK1 symmetrical	period	Middle Kingdom, 12th Dynasty	size	200x44.6x7.5
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife, unsharpened (straight edge on profile). Light side has wide with few scars, dark side has narrow and many scars.				

max length	200	max width	44.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M240
simple name	knife, MK1	period	Middle Kingdom, 12th Dynasty	size	180x35x7.1
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife, sharpening of blade carried out from both sides. Some evidence of a handle.				

max length	180	max width	35	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6798
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	60.7x14.1x3.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	tomb 295	context	
date evidence					
references					
description	Blade.				

max length	60.7	max width	14.1	retouch	
width(quarter)	12	thickness(quarter)	3.2	termination	
width(half)	12.1	thickness(half)	3	blade part	proximal
width(3 quarter)	14.1	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M6186i

simple name	bifacial thinning piece	period	Middle Kingdom, 12th Dynasty	size	62.2x21x3.2
functional name		colour	mid brown	shape	
excavation no		house/tomb	label on bag reads '	context	

date evidence	
references	
description	Bifacial thinning piece.

max length	62.2	max width	21	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M6186ii

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	66.9x14.8x5.4
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb	label on bag reads '	context	

date evidence	
references	
description	Blade.

max length	66.9	max width	17.4	retouch	
width(quarter)	17.4	thickness(quarter)	5	termination	
width(half)	14.8	thickness(half)	5.4	blade part	complete
width(3 quarter)	12.7	thickness(3 quarter)	5.1	segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5623

simple name	blade, unretouched	period		size	39x16.3x3.2
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Blade Abydos WII EEF.

max length	39	max width	16.3	retouch	
width(quarter)	15.7	thickness(quarter)	3.2	termination	
width(half)	16.3	thickness(half)	2.3	blade part	medial
width(3 quarter)	14.7	thickness(3 quarter)	2.1	segmented/truncated	

wear	

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M509i

simple name	blade, retouched, lateral	period	New Kingdom, 18th-19th Dynas	size	61.6x28x10.5
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade Gurob 1889. Griffith 1910 quotes 'Kahun XVI'				

max length	61.6	max width	28	retouch	steep dorsal retouch both ends. backed
width(quarter)	24.1	thickness(quarter)	10.5	termination	
width(half)	28	thickness(half)	8.5	blade part	medial
width(3 quarter)	26	thickness(3 quarter)	9	segmented/truncated	
wear	gloss				

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M509ii

simple name	blade, retouched, lateral	period	New Kingdom, 18th-19th Dynas	size	50.5x30.5x6,9
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade Gurob 1889. Griffith 1910 quotes 'Kahun XVI'				

max length	50.5	max width	31	retouch	steep dorsal retouch both ends. backed
width(quarter)	29.1	thickness(quarter)	6	termination	
width(half)	31	thickness(half)	6.9	blade part	medial
width(3 quarter)	30.5	thickness(3 quarter)	6	segmented/truncated	
wear	gloss				

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M509iii

simple name	blade, retouched, lateral	period	New Kingdom, 18th-19th Dynas	size	81.2x26.2x10.5
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade Gurob 1889. Griffith 1910 quotes 'Kahun XVI'				

max length	81.2	max width	26.2	retouch	truncated one end and snapped other. M
width(quarter)	23.6	thickness(quarter)	9	termination	
width(half)	25.7	thickness(half)	9.7	blade part	medial
width(3 quarter)	26.2	thickness(3 quarter)	10.5	segmented/truncated	seg + trunc
wear	gloss				

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M509iv

simple name	blade, retouched, lateral	period	New Kingdom, 18th-19th Dynas	size	62.3x18.3x6.9
functional name	sickle	colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade Gurob 1889. Griffith 1910 quotes 'Kahun XVI'				

max length	62.3	max width	18.3	retouch	serrated end sickle probably made on a
width(quarter)	18.3	thickness(quarter)	6.9	termination	
width(half)	14.8	thickness(half)	6	blade part	medial
width(3 quarter)	12	thickness(3 quarter)	5.6	segmented/truncated	
wear					

PLACE	Rifeh	MUSEUM	Manchester	MUSEUM NO.	M4242

simple name	knife, MK2	period	Middle Kingdom, 12th Dynasty	size	105.3x41x8.9
functional name		colour	mid brown	shape	
excavation no		house/tomb	cemetery S	context	
date evidence					
references					
description	Bifacial knife.				

max length	105	max width	41	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5641

simple name	flake	period	New Kingdom, 18th Dynasty	size	48x38.3x4.3
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Flake (possibly part of a sharpening fragment) D114 (see EEF).				

max length	48	max width	44	retouch	
width(quarter)	36.9	thickness(quarter)	4.1	termination	
width(half)	38.3	thickness(half)	4.1	blade part	
width(3 quarter)	44	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M508iii
simple name	blade or flake knife	period	New Kingdom, 18th Dynasty-19	size	93.1x49x5.7
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife made on flake/blade. Not bifacial. retouch mainly dorsal, some ventral.				

max length	93.1	max width	49	retouch	mainly dorsal retouch
width(quarter)	36.8	thickness(quarter)	5.1	termination	
width(half)	40.7	thickness(half)	5.3	blade part	complete
width(3 quarter)	49	thickness(3 quarter)	5.7	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M508ii
simple name	flake	period	New Kingdom, 18th Dynasty-19	size	98.6x64.9x9.2
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Unretouched flake.				

max length	98.6	max width	64.9	retouch	
width(quarter)	64.7	thickness(quarter)	9.2	termination	
width(half)	64.9	thickness(half)	8.1	blade part	complete
width(3 quarter)	50.7	thickness(3 quarter)	6.5	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M508i
simple name	blade or flake knife or sc	period	New Kingdom, 18th Dynasty-19	size	88.2x49.7x10.4
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Possibly illustrated in Petrie 1890, pl. XVI				
description	Retouched flake or blade.				

max length	88.2	max width	49.7	retouch	mainly dorsal retouch
width(quarter)	44	thickness(quarter)	10.4	termination	
width(half)	49.7	thickness(half)	7.7	blade part	
width(3 quarter)	47.4	thickness(3 quarter)	6	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M508iv

simple name	blade or flake knife or sc	period	New Kingdom, 18th Dynasty-19	size	86.9x46.8x8.7
functional name		colour	very dark brown/bla	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Leaf scraper made on a flake/blade.				

max length	86.9	max width	46.8	retouch	
width(quarter)		thickness(quarter)	7.3	termination	
width(half)		thickness(half)	4.8	blade part	complete
width(3 quarter)		thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M247

simple name	axe	period	Middle Kingdom, 12th Dynasty	size	136.2x118.1x18
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1890, pl. XVI				
description	Axe.				

max length	136	max width	118	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	18	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507i

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	83x17.9x4.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, no retouch.				

max length	83	max width	17.9	retouch	
width(quarter)	17.9	thickness(quarter)	4.9	termination	
width(half)	16.4	thickness(half)	4.8	blade part	distal
width(3 quarter)	13.4	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507ii
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	73.1x15.7x4.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, no retouch.				

max length	73.1	max width	15.7	retouch	
width(quarter)	15.7	thickness(quarter)	4.5	termination	
width(half)	14.9	thickness(half)	4.3	blade part	proximal
width(3 quarter)	12.5	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507iii
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	66.4x11.2x2.8
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, no retouch.				

max length	66.4	max width	11.2	retouch	
width(quarter)	11.2	thickness(quarter)	2.8	termination	
width(half)	10.1	thickness(half)	2.5	blade part	proximal
width(3 quarter)	9.6	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507iv
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	49.3x7.9x2.7
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, no retouch.				

max length	49.3	max width	7.9	retouch	
width(quarter)	7.7	thickness(quarter)	2.7	termination	
width(half)	7.9	thickness(half)	2.6	blade part	proximal
width(3 quarter)	7.4	thickness(3 quarter)	2.3	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507v

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	73.8x12.7x3.6
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, notched or possibly trample damageno retouch.				

max length	73.8	max width	12.7	retouch	
width(quarter)	12.7	thickness(quarter)	5.5	termination	
width(half)	11.2	thickness(half)	3.6	blade part	proximal
width(3 quarter)	10.2	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507vi

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	48.5x13.2x3.1
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, no retouch.				

max length	48.5	max width	13.2	retouch	
width(quarter)	13.2	thickness(quarter)	3.5	termination	
width(half)	10.3	thickness(half)	3.1	blade part	proximal
width(3 quarter)	8.9	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507vii

simple name	blade, crested	period	New Kingdom, 18th Dynasty-19	size	75.3x15.1x5.8
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, crested left no retouch.				

max length	75.3	max width	15.1	retouch	
width(quarter)	14.2	thickness(quarter)	5.8	termination	
width(half)	13.7	thickness(half)	5.4	blade part	complete
width(3 quarter)	15.1	thickness(3 quarter)	5.4	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507viii
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	57.5x14x3.8
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, no retouch.				

max length	57.5	max width	17.7	retouch	
width(quarter)	14	thickness(quarter)	3.7	termination	
width(half)	13.5	thickness(half)	3.8	blade part	proximal
width(3 quarter)	17.7	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Gurob	MUSEUM	Manchester	MUSEUM NO.	M507ix
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty-19	size	77.4x7.4x5.9
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb	marked 'Gurob 188	context	
date evidence					
references					
description	Blade, no retouch.				

max length	77.4	max width	17.4	retouch	
width(quarter)	17.4	thickness(quarter)	4.1	termination	
width(half)	17.1	thickness(half)	5	blade part	complete
width(3 quarter)		thickness(3 quarter)	5.9	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11527
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	105.1x43.8x11.7
functional name		colour	light brown	shape	narrow
excavation no		house/tomb	TA 81 NC U24 Are	context	North City, U24.
date evidence					
references					
description	1983-84 EES excavation. Blade, irregular, no retouch. This is from the North City 1981 excavation published by Kemp 1983. U24.1 is a subsidiary house described on page 18. On page 20 'a collection of worked flint tools' is mentioned.				

max length	105	max width	43.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	11.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11521

simple name	flake, broken	period	New Kingdom, 18th Dynasty			size	58.8x43.9x12.4
functional name			colour	mid brown		shape	
excavation no			house/tomb	TA 81 NC U24.5 1		context	North City
date evidence							
references							
description	1983-84 EES excavation. Broken flake. This is from the North City 1981 excavation published by Kemp 1983. On page 20 'a collection of worked flint tools' is mentioned.						
max length	58.8	max width	43.9	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	14.4			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11522

simple name	flake, retouched	period	New Kingdom, 18th Dynasty			size	45.9x35.4x6.2
functional name			colour	mid brown		shape	
excavation no			house/tomb	TA 81 NC U 24.5 1		context	North City
date evidence							
references							
description	1983-84 EES excavation. Retouched flake, probably manufactured with a hard hammer. This is from the North City 1981 excavation published by Kemp 1983. On page 20 'a collection of worked flint tools' is mentioned.						
max length	45.9	max width	35.4	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.2			blade part	proximal
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11528

simple name	flake	period	New Kingdom, 18th Dynasty			size	75.6x78.8x12.1
functional name			colour	mid brown		shape	
excavation no			house/tomb	TA 24.1 Granary 1		context	North City
date evidence							
references							
description	1983-84 EES excavation. Flake. This is from the North City 1981 excavation published by Kemp 1983. U24.1 is described on page 18. On page 20 'a collection of worked flint tools' is mentioned.						
max length	75.6	max width	78.8	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	12.1			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11523

simple name	crescentic drill bit	period	New Kingdom, 18th Dynasty			size	87.1x48.9x27.9
functional name			colour	mid brown		shape	
excavation no			house/tomb	TA NC 81 118 (gro		context	North City
date evidence							
references							
description	1983-84 EES excavation. Drill bit, broken. This is from the North City 1981 excavation published by Kemp 1983. On page 20 'a collection of worked flint tools' is mentioned.						
max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	27.9			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11526

simple name	flake	period	New Kingdom, 18th Dynasty			size	53.2x39.2x8.3
functional name			colour	very dark brown		shape	
excavation no			house/tomb	TA NC 81 128 (lab		context	North City
date evidence							
references							
description	1983-84 EES excavation. Broken blade, no retouch. This is from the North City 1981 excavation published by Kemp 1983. On page 20 'a collection of worked flint tools' is mentioned.						
max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	8.3			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11525

simple name	flake	period	New Kingdom, 18th Dynasty			size	53.2x39.2x8.3
functional name			colour	orange/mid brown		shape	
excavation no			house/tomb	TA NC 81 128 (lab		context	North City
date evidence							
references							
description	1983-84 EES excavation. Broken blade, no retouch. This is from the North City 1981 excavation published by Kemp 1983. On page 20 'a collection of worked flint tools' is mentioned.						
max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	11.2			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38232(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	71.7x30x7.8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacaial knife fragment sharpened with blade pointing away from sharpener.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38231(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	67.8x34.7x7.2
functional name		colour	dark grey	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial knife fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38224(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	111.2x40.5x7.6
functional name		colour	mid brown, banded	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial knife fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38222(250)

simple name	bifacial tool	period	Middle Kingdom, 12th Dynasty	size	117.3x30.4x7
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial tool. One end broken. Possibly a knife.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38225(250)

simple name	bifacial tool fragment	period	Middle Kingdom, 12th Dynasty	size	69x33.4x10.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M28223(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	121.6x38.6x6.4
functional name		colour	mid brown, banded	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38234(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	78x31x8.4
functional name		colour	dark grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial knife fragment. Exhibits 'Seitenbezogenheit'				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38235(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	58.6x31.1x7.2
functional name		colour	mid pink/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial knife fragment.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38233(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	69x31x6.8
functional name		colour	mid brown, banded	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial knife fragment.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38214(250)
simple name	knife, MK3	period	Middle Kingdom, 12th Dynasty	size	134.7x36x9.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial knife sharpened as though blade were pointing away from sharpener. Exhibits 'Seitenbezogenheit'

max length	135	max width	36	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38213(250)
simple name	knife fragment, MK	period	Middle Kingdom, 12th Dynasty	size	125.4x28.4x6.1
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial knife fragment. Exhibits 'Seitenbezogenheit'. Very similar to Petrie 1891, pl. VII no. 14.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38247(250)
simple name	bifacial fragment	period	Middle Kingdom, 12th Dynasty	size	91.2x29.5x8.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38246(250)

simple name	debitage (shatter)	period	Middle Kingdom, 12th Dynasty	size	56.5x27.7x12.2
functional name		colour	mid grey brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Shatter.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38245(250)

simple name	bifacial fragment	period	Middle Kingdom, 12th Dynasty	size	60.7x31.1x7.5
functional name		colour	mid grey/brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Bifacial fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38244(250)

simple name	flake	period	Middle Kingdom, 12th Dynasty	size	75.9x30x8.2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Flake.

max length	75.9	max width	30	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38243(250)
simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	82.7x44.8x8.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Probably a knife fragment. One side abraded flat bifacial fragment.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38242(250)
simple name	bifacial fragment	period	Middle Kingdom, 12th Dynasty	size	59x42.6x7.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial fragment.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38218(250)
simple name	knife,	period	Middle Kingdom, 12th Dynasty	size	102.6x25.2x8.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife.				

max length		max width	25.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38217(250)

simple name	knife fragment, tip	period	Middle Kingdom, 12th Dynasty	size	114.6x31.3x7.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife tip. Exhibits negative 'Seitenbezogenheit'

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38216(250)

simple name	knife, fragment, tip	period	Middle Kingdom, 12th Dynasty	size	120.3x34.6x6.4
functional name		colour	mid pink/brown, ba	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife tip. Exhibits positive 'Seitenbezogenheit'.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38238(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	59.3x35.9x6.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife fragment.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38237(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	66.3x29.6x5.9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Knife fragment, appears braded flat on one side or made on blade or flake.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.9			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38236(250)

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	44.9x30.5x6.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Knife fragment.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.7			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38239(250)

simple name	knife fragement	period	Middle Kingdom, 12th Dynasty	size	43.5x24.6x8.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Knife fragment.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	8.7			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38240(250)
simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	68.9x38.7x7.2
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife fragment.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38241(250)
simple name	knife fragment?	period	Middle Kingdom, 12th Dynasty	size	60.7x40.8x8
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife fragment.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38219(250)
simple name	bifacial tool	period	Middle Kingdom, 12th Dynasty	size	93.9x35x7.3
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial tool. While this resembles a type 1 axe, its thickness is suggestive of a knife. It cout be a heavily resharpened knife.				

max length		max width	35	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38221(250)
simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	97x32.4x8.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife fragment.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38220(250)
simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	119.1x33.3x9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Knife fragment.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M38230(250)
simple name	bifacial point	period	Middle Kingdom, 12th Dynasty	size	76x36.3x7.8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Bifacial fragment.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Petrie	MUSEUM NO.	UC16780

simple name	animal	period	Middle Kingdom	size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Flint hippopotamus.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Dashur	MUSEUM	Petrie	MUSEUM NO.	UC11771

simple name	palette?	period	Old Kingdom, 5th Dynasty?	size	134x59
functional name		colour	pink/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie 1903a, 80, fig 48; Petrie 1927, pl. LVI.9				
description	The throne name is Djed-ka-ra.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Petrie	MUSEUM NO.	UC21053

simple name	amulet?	period		size	
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Perhaps an amulet, described in the catalogue as a 'ring bead'.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Petrie	MUSEUM NO.	UC6368
simple name	blade, unretouched	period	Middle Kingdom, 11th-13th Dyn	size	58.6x11x2.8
functional name		colour	mid brown	shape	
excavation no		house/tomb	tomb 112, Cemetry	context	
date evidence					
references	Engelbach and Gunn 1923, pl. 14, 1 (xx)				
description					

max length	58.6	max width	11	retouch	
width(quarter)	11	thickness(quarter)	2.5	termination	
width(half)	10	thickness(half)	2.8	blade part	distal
width(3 quarter)	9.5	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M244
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	133.8x52.9x11
functional name		colour	mid grey brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Large blade marked 'M' in pencil. Hinges on dorsal side.				

max length	134	max width	52.9	retouch	ventral
width(quarter)	52.9	thickness(quarter)	8.5	termination	hinges on dorsal
width(half)	46.8	thickness(half)	11	blade part	complete
width(3 quarter)	36.7	thickness(3 quarter)	8.9	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M6684B
simple name	pebble, flakes	period	Middle Kingdom, 12th Dynasty	size	84x75.1x24.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M250i

simple name	knife, MK1 or MK3	period	Middle Kingdom, 12th Dynasty	size	88.7x52.2x9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Knife fragment. One side has wider and slightly fewer flakes on one side than the other.

max length	88.7	max width	52.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M250ii

simple name	bifacial tool	period	Middle Kingdom, 12th Dynasty	size	141.9x34.5x9.7
functional name		colour	light brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Bifacial tool with pencil mark 'M'.

max length	142	max width	34.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M250iii

simple name	?	period	Middle Kingdom, 12th Dynasty	size	76.4x28.5x8.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Broken tool. Flat one side.

max length	76.4	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	28.5	thickness(half)	8.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M241?

simple name	knife, MK2	period	Middle Kingdom, 12th Dynasty			size	178x36.5x6.4
functional name			colour	mid-dark brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Knife made on flake/blade (flat on one side). Steep retouch on both lateral edges, from one side. Deposit on one side. Unfinished?

max length	178	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)	36.5	thickness(half)	6.4			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M250iv

simple name	flake, retouched	period	Middle Kingdom, 12th Dynasty			size	76.5x55.9x10.5
functional name			colour	mid brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Retouched flake.

max length	76.5	max width		retouch	dorsal		
width(quarter)		thickness(quarter)				termination	hinge
width(half)	55.9	thickness(half)	10.5			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M250v

simple name	knife, MK	period	Middle Kingdom, 12th Dynasty			size	149.5x35.4x6.2
functional name			colour	light brown		shape	
excavation no			house/tomb			context	

date evidence	
references	
description	Blade sharpened away from user (if the point is the tip). Seitenbezogenheit .

max length	150	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)	35.4	thickness(half)	6.2			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M250vi

simple name	knife, MK2	period	Middle Kingdom, 12th Dynasty	size	120x35.3x8.1
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade sharpened away from user (if the point is the tip). Seitenbezogenheit.				

max length	120	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	35.3	thickness(half)	8.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M239b

simple name	knife, MK1 symmetrical	period	Middle Kingdom, 12th Dynasty	size	169x46.6x7.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Spurrell 1891, pl. VII, 7				
description	No sharpening.				

max length	167	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	46.6	thickness(half)	7.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Manchester	MUSEUM NO.	M239c

simple name	knife, MK1 symmetrical	period	Middle Kingdom, 12th Dynasty	size	137.8x34.6x6.2
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	No sharpening.				

max length	138	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	34.6	thickness(half)	6.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1067
simple name	blade, Intermediate	period	Old Kingdom, 3rd Dynasty	size	58.2x22.1x5.2
functional name	Intermediate	colour	very dark brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Blade truncated as one end and broken at the other.				

max length	58.2	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	22.1	thickness(half)	5.2	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	seg + trunc
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1103A
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	63x59x17
functional name		colour	mid brown/orange	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. XV				
description					

max length	63	max width	59	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	17	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1103B(38071)
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	70.9x32.3x11
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Patinated.				

max length	70.9	max width	32.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	11	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1103C(38072)

simple name	blade, retouched	period	Old Kingdom, 3rd Dynasty	size	70x28.6x12.2
functional name		colour	mid-dark brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description	Patinated, dorsal retouch along both lateral edges. hard hammer.				

max length	70	max width	28.6	retouch	dorsal
width(quarter)	28.6	thickness(quarter)	12.2	termination	
width(half)	27.4	thickness(half)	10.3	blade part	
width(3 quarter)	26.3	thickness(3 quarter)	8.1	segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1103D(38073)

simple name	?	period	Old Kingdom, 3rd Dynasty	size	66.4x54.5x23.5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	66.4	max width	54.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	23.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M1202

simple name	arrowhead, bifacial	period	Early Dynastic, 1st Dynasty	size	41x9.5x3.2
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Petrie and Griffith 1901, pl. IV, 14				
description					

max length	41	max width	9.5	retouch	
width(quarter)	3.2	thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1102A
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	82.6x40.3x25.7
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. XV				
description	Patinated, red deposit in hollow (probably modern as very bright).				
max length	82.6	max width	40.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	25.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1102B
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	77.5x49.3x29.6
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. XV				
description	Patinated, red deposit in hollow (probably modern as very bright).				
max length	77.5	max width	49.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	29.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1102C
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	85.9x20.7x19.9
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. XV				
description	Patinated.				
max length	85.9	max width	20.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	19.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1102D
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	76.7x45.9x32.2
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. XV				
description	Patinated.				

max length	76.7	max width	45.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	32.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1102E
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	89.4x44.9x30.3
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. XV				
description	Patinated.				

max length	89.4	max width	44.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	30.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1102F
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	81.9x44x32
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. XV				
description	Red deposit in hollow (probably modern as very bright).				

max length	81.9	max width	44	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	32	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1095A
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	112.2x51.3x27.5
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl.X				
description	Patinated and marked in pencil '25'.				

max length	112	max width	51.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	27.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1095B
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	87.8x56.5x39.2
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. X				
description	Patinated.				

max length	87.8	max width	56.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	39.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1095C
simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	83.2x47.5x22
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. X				
description	Patinated.				

max length	83.2	max width	47.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	22	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1095D

simple name	crescentic drill bit	period	Old Kingdom, 3rd Dynasty	size	56x23.2x15.2
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Garstang and Sethe 1903, pl. X				
description	Patinated.				

max length	56	max width	23.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	15.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3527

simple name	knife, OK5	period	Early Dynastic, 1st Dynasty-Old	size	110x32.5x6.8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Broken handle, blade retouched with blade pointing towards knapper. Negative Seitenbezogenheit. Rouch.				

max length	110	max width	32.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3528

simple name	knife,	period	Early Dynastic, 1st Dynasty-Old	size	118.5x41.2x7.2
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Retouched with blade pointing away from knapper and turned for the handle. Positive Seitenbezogenheit.				

max length	110	max width	32.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3529A

simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	96.7x60.1x8.4
functional name		colour	mottled brown and	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Positive Seitenbezogenheit.				

max length	96.7	max width	60.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3529B

simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	73.9x6.1x8.1
functional name		colour	mottled brown and	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	73.9	max width	6.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3530

simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	99x36.5x9.3
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Seitenbezogenheit.				

max length	99	max width	36.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3531
simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	69x30x6.6
functional name		colour	mid brown/grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Flat one side suggesting made on a flake.				
max length	69	max width	30	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3532
simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	72.8x43.8x6.3
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Made on flake (flat one side). Blade sharpened from non-flat i.e. ventral side).				
max length	72.8	max width	43.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3533
simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	58.2x32.6x7
functional name		colour	very dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Handle?				
max length	58.2	max width	32.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3534

simple name	waste	period	Early Dynastic, 1st Dynasty-Old	size	36.5x27.7x14.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Waste.				

max length	36.5	max width	27.7	retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	15.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3535

simple name	flake, retouched	period	Early Dynastic, 1st Dynasty-Old	size	58.2x61x14.4
functional name		colour	light-mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Steep dorsal retouch on three sides.				

max length	58.2	max width	61	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	14.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3536

simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	33.3x61.5x7.2
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	33.3	max width	61.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3537
simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	71.3x45.4x10
functional name		colour		shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	71.3	max width	45.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3538
simple name	knife fragment	period	Early Dynastic, 1st Dynasty-Old	size	53.1x52x8.6
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	53.1	max width	52	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3539
simple name	blade, retouched	period	Early Dynastic, 1st Dynasty-Old	size	71.1x15.9x5.2
functional name		colour	very dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Dorsal, lateral retouch along both edges.				

max length	71.1	max width	15.9	retouch	dorsal
width(quarter)	15.9	thickness(quarter)	5.2	termination	
width(half)	13.9	thickness(half)	4.9	blade part	complete
width(3 quarter)	12.1	thickness(3 quarter)	4.6	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3546

simple name	axe, polished	period	Early Dynastic, 1st Dynasty-Old	size	78.3x33.1x15.9
functional name		colour	light grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	78.3	max width	33.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	15.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3550

simple name	blade	period	Early Dynastic, 1st-2nd Dynasty	size	80.5x42.9x8.3
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Complete blade with cortex and hinge fracture.				

max length	80.5	max width	42.9	retouch	
width(quarter)	38.5	thickness(quarter)	5.3	termination	
width(half)	40.2	thickness(half)	6.8	blade part	complete
width(3 quarter)	42.9	thickness(3 quarter)	8.3	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3551

simple name	blade	period	Early Dynastic, 1st-2nd Dynasty	size	91.6x47.7x18.4
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Rough blade with traces of reddish deposit (possibly modern as very bright), retouch all way round.				

max length	91.6	max width	47.7	retouch	
width(quarter)	41.4	thickness(quarter)	18.4	termination	
width(half)	45.1	thickness(half)	17	blade part	proximal
width(3 quarter)	47.7	thickness(3 quarter)	17	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3552

simple name	flake, retouched	period	Early Dynastic, 1st-2nd Dynasty	size	76.3x69.2x6.3
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Retouched flake, triangular.				

max length	76.3	max width	69.2	retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3553

simple name	bifacial tool	period	Early Dynastic, 1st-2nd Dynasty	size	55.8x44.4x17.6
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	55.8	max width	44.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	17.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3554

simple name	blade, retouched	period	Early Dynastic, 1st-2nd Dynasty	size	105.5x55.5x22
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Large retouched blade with red/orange deposit near the proximal end.				

max length	106	max width	55.5	retouch	dorsal, right
width(quarter)	55.5	thickness(quarter)	22	termination	
width(half)	51.2	thickness(half)	17.4	blade part	complete
width(3 quarter)	46.9	thickness(3 quarter)	15.5	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3555

simple name	knife,OK8	period	Early Dynastic, 1st Dynasty-Old	size	109.2x40x9
functional name		colour	mid grey-brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Leaf shaped knife, twisted so that it does not lie flat. Ridge down the middle on one side.				

max length	109	max width	40	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3556

simple name	blade, retouched, lateral	period	Early Dynastic, 1st Dynasty-Old	size	91.6x16.8x5.9
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Lipped.				

max length	91.6	max width	16.8	retouch	dorsal, right
width(quarter)	15.3	thickness(quarter)	3.5	termination	
width(half)	16.8	thickness(half)	5.9	blade part	complete
width(3 quarter)	14.1	thickness(3 quarter)	5.3	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3557

simple name	blade, retouched, lateral	period	Early Dynastic, 1st Dynasty-Old	size	86.4x15.3x5.2
functional name	sickle	colour	light brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	86.4	max width	15.3	retouch	dorsal and ventral right
width(quarter)	15.3	thickness(quarter)	3.5	termination	
width(half)	14.3	thickness(half)	4.6	blade part	complete
width(3 quarter)	15.1	thickness(3 quarter)	5.2	segmented/truncated	
wear	gloss dorsal right				

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3558
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	54.2x11.5x4.7
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	54.2	max width	11.5	retouch	
width(quarter)	11.5	thickness(quarter)	4.1	termination	
width(half)	11.5	thickness(half)	4.5	blade part	medial
width(3 quarter)	10.1	thickness(3 quarter)	4.7	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3559
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	90.3x15.3x5.4
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	90.3	max width	15.3	retouch	
width(quarter)	15.3	thickness(quarter)	5	termination	
width(half)	13.5	thickness(half)	5.2	blade part	complete
width(3 quarter)	15	thickness(3 quarter)	5.4	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3560
simple name	blade, retouched	period	Early Dynastic, 1st Dynasty-Old	size	66.3x15.5x4.8
functional name		colour	light brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	66.3	max width	15.5	retouch	ventral, right and left
width(quarter)	15.5	thickness(quarter)	4.4	termination	
width(half)	15	thickness(half)	4.5	blade part	medial
width(3 quarter)	14.2	thickness(3 quarter)	4.8	segmented/truncated	
wear	gloss dorsal and distal				

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3561
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	77.6x12.1x4.8
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	77.6	max width	12.1	retouch	
width(quarter)	11.4	thickness(quarter)	3.3	termination	
width(half)	11.8	thickness(half)	4.8	blade part	complete
width(3 quarter)	12.1	thickness(3 quarter)	4.8	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3562
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	63.4x10.4x5
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	63.4	max width	10.4	retouch	
width(quarter)	9.3	thickness(quarter)	3.8	termination	
width(half)	10	thickness(half)	4.5	blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	5	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3563
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	82.2x13.8x3.8
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	82.2	max width	13.8	retouch	
width(quarter)	13.8	thickness(quarter)	3.8	termination	
width(half)	12	thickness(half)	3.8	blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3564
simple name	blade, retouched, lateral	period	Early Dynastic, 1st Dynasty-Old	size	71.2x20.6x5
functional name		colour	light brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	71.2	max width	20.6	retouch	dorsal, right
width(quarter)	18.9	thickness(quarter)	4.4	termination	
width(half)	20.6	thickness(half)	5	blade part	complete
width(3 quarter)	17.5	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3565
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	64.3x11.2x3.7
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	64.3	max width	11.2	retouch	
width(quarter)	11	thickness(quarter)	3.5	termination	
width(half)	11.2	thickness(half)	3.4	blade part	complete
width(3 quarter)	9.3	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3566
simple name	blade, crested?	period	Early Dynastic, 1st Dynasty-Old	size	79.9x27x10.8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	79.9	max width	27	retouch	
width(quarter)	27	thickness(quarter)	6.8	termination	
width(half)	24.6	thickness(half)	10.8	blade part	complete
width(3 quarter)	26.3	thickness(3 quarter)	9.3	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3567

simple name	razor, square	period	Early Dynastic, 1st Dynasty-Old	size	61.6x20.5x6.8
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	61.6	max width	21.2	retouch	
width(quarter)	19.8	thickness(quarter)	6	termination	
width(half)	20.5	thickness(half)	6.8	blade part	
width(3 quarter)	21.2	thickness(3 quarter)	6.8	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3568

simple name	blade, retouched, lateral	period	Early Dynastic, 1st Dynasty-Old	size	52.5x18.8x18.8
functional name		colour	mid grey	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	52.2	max width	18.8	retouch	truncated proximal and distal
width(quarter)	18.8	thickness(quarter)	10.6	termination	
width(half)	18.8	thickness(half)	18.8	blade part	distal
width(3 quarter)	17	thickness(3 quarter)	17.5	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3569

simple name	razor, square/Intermediat	period	Early Dynastic, 1st Dynasty-Old	size	61.4x23.1x7
functional name	Intermediate	colour	mid-dark brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	This is long for a razor, is not regular compared to others and has lateral retouch.				

max length	61.4	max width	23.1	retouch	
width(quarter)	23.1	thickness(quarter)	7	termination	
width(half)	20	thickness(half)	6	blade part	medial
width(3 quarter)	19.8	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3571
simple name	blade, retouched, lateral	period	Early Dynastic, 1st Dynasty-Old	size	57.9x17.4x7.8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	57.9	max width	17.4	retouch	
width(quarter)	12.3	thickness(quarter)	3.7	termination	
width(half)	13.4	thickness(half)	6	blade part	complete
width(3 quarter)	17.4	thickness(3 quarter)	7.8	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3573
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	70.6x21.5x7.3
functional name		colour	mid-dark brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	70.6	max width	21.5	retouch	
width(quarter)	21.5	thickness(quarter)	7.3	termination	
width(half)	20.5	thickness(half)	6.6	blade part	complete
width(3 quarter)	21.5	thickness(3 quarter)	7.3	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3574
simple name	blade, crested?	period	Early Dynastic, 1st Dynasty-Old	size	63x21.5x8.8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	63	max width	21.5	retouch	
width(quarter)	21.5	thickness(quarter)	6.9	termination	
width(half)	16.1	thickness(half)	8.8	blade part	complete
width(3 quarter)	14.4	thickness(3 quarter)	7.2	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3575

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	69.9x17x6.8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	

date evidence

references

description

max length	69.9	max width	17	retouch	
width(quarter)	14.1	thickness(quarter)	3.8	termination	
width(half)	15.6	thickness(half)	5.7	blade part	distal
width(3 quarter)	17	thickness(3 quarter)	6.8	segmented/truncated	

wear

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3576

simple name	razor, square/Intermediat	period	Early Dynastic, 1st Dynasty-Old	size	71.6x26.6x8.8
functional name	Intermediate	colour	mid-dark brown	shape	broad
excavation no		house/tomb		context	

date evidence

references

description: A longer form of the razor.

max length	71.6	max width	26.6	retouch	truncated, proximal and distal
width(quarter)	23.6	thickness(quarter)	5.4	termination	
width(half)	26.6	thickness(half)	6.8	blade part	distal
width(3 quarter)	25.9	thickness(3 quarter)	8.8	segmented/truncated	

wear

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3572

simple name	knife, OK	period	Early Dynastic, 1st Dynasty-Old	size	95x25.6x7.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Flat one side suggesting made on a flake, unfinished? Positive Seitenbezogenheit.

max length	95	max width	25.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3579

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	74.9x24.3x7.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	74.9	max width	24.3	retouch	
width(quarter)	21.4	thickness(quarter)	7.5	termination	
width(half)	22.6	thickness(half)	7.1	blade part	
width(3 quarter)	24.3	thickness(3 quarter)	6.8	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3577

simple name	knife,	period	Early Dynastic, 1st Dynasty-Old	size	68x32.1x9.3
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade has steep retouch. Positive Seitenbezogenheit.				

max length	68	max width	32.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3578

simple name	knife	period	Early Dynastic, 1st Dynasty-Old	size	72.3x27.1x8
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Twisted, ridge down middle on one side (see M3555).				

max length	72.3	max width	27	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3580
simple name	flake	period	Early Dynastic, 1st Dynasty-Old	size	94.3x37.2x11.3
functional name		colour	light grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Cortical flake.				
max length	94.3	max width	37.9	retouch	
width(quarter)	33.7	thickness(quarter)	11.3	termination	
width(half)	37.2	thickness(half)	11	blade part	complete
width(3 quarter)	37.9	thickness(3 quarter)	9.4	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3581
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	54.4x19.8x7.6
functional name		colour	light-mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	54.4	max width	19.8	retouch	
width(quarter)	19.8	thickness(quarter)	7.6	termination	
width(half)	19.8	thickness(half)	7.3	blade part	complete
width(3 quarter)	19	thickness(3 quarter)	6.9	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3582
simple name	crested blade, retouched	period	Early Dynastic, 1st Dynasty-Old	size	90x19x9.1
functional name		colour	light-mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	90	max width	19	retouch	ventral right and left
width(quarter)	14.5	thickness(quarter)	7.7	termination	
width(half)	18	thickness(half)	9.1	blade part	distal
width(3 quarter)	19	thickness(3 quarter)	7.4	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3583

simple name	bifacial tool	period	Early Dynastic, 1st Dynasty-Old	size	78.8x24.6x7.2
functional name		colour	light-mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	78.8	max width	24.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3584

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty-Old	size	37.1x18.2x4.9
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	37.1	max width	18.2	retouch	
width(quarter)	18.2	thickness(quarter)	4.9	termination	
width(half)	16.2	thickness(half)	4	blade part	complete
width(3 quarter)	12.6	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M3585

simple name	blade, retouched, lateral	period	Early Dynastic, 1st Dynasty-Old	size	85.7x37.9x10.6
functional name		colour	mid grey/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Steep dorsal retouch lateral left.				

max length	85.7	max width	37.9	retouch	dorsal, left
width(quarter)	37.9	thickness(quarter)	10.6	termination	
width(half)	33.3	thickness(half)	9.6	blade part	complete
width(3 quarter)	29.8	thickness(3 quarter)	8	segmented/truncated	
wear					

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4821

simple name	flake, retouched	period	Early Dynastic, 1st Dynasty	size	46.5x31.6x3.7
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Meydum and Memphis p 6, pl. XXI, 21				
description					

max length	46.5	max width	31.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Ballas	MUSEUM	Manchester	MUSEUM NO.	M4689

simple name	blade, lateral	period	Old Kingdom, 3rd Dynasty	size	
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Meydum and Memphis p 6, pl. XXI, 21				
description	Truncated one end, broken other. Serrated dorsal side and steep retouch other.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	seg + trunc
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M5169c

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	115.8x24.6x9.8
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb	tomb 55	context	
date evidence					
references	Meydum and Memphis p 6, pl. XXI, 21				
description					

max length	116	max width	24.6	retouch	
width(quarter)	23.1	thickness(quarter)	5.3	termination	
width(half)	24.2	thickness(half)	7.5	blade part	complete
width(3 quarter)	24.6	thickness(3 quarter)	9.8	segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M5169d

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	113.7x27.2x5.7
functional name	broad/intermediate	colour	banded mid brown	shape	broad
excavation no		house/tomb	tomb 55	context	
date evidence					
references	Meydum and Memphis p 6, pl. XXI, 21				
description					

max length	114	max width	27.2	retouch	
width(quarter)	22.4	thickness(quarter)	3.6	termination	
width(half)	26.7	thickness(half)	5.2	blade part	complete
width(3 quarter)	27.2	thickness(3 quarter)	5.7	segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M5169e

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	114.8x27x7.2
functional name	broad/intermediate	colour	banded mid brown	shape	broad
excavation no		house/tomb	tomb 55	context	
date evidence					
references	Meydum and Memphis p 6, pl. XXI, 21				
description					

max length	115	max width	27	retouch	
width(quarter)	22.7	thickness(quarter)	5.5	termination	
width(half)	26.7	thickness(half)	7.2	blade part	complete
width(3 quarter)	27	thickness(3 quarter)	7	segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M5169a

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	82.7x27x6.9
functional name	broad/intermediate	colour	mid brown	shape	broad
excavation no		house/tomb	tomb 55	context	
date evidence					
references	Meydum and Memphis p 6, pl. XXI, 21				
description	Joined to b.				

max length	82.7	max width	27	retouch	
width(quarter)	23.5	thickness(quarter)	4.7	termination	
width(half)	24.9	thickness(half)	5.2	blade part	complete
width(3 quarter)	27	thickness(3 quarter)	6.9	segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M5169b

simple name	blade, unretouched	period	Old Kingdom, 3rd Dynasty	size	89.9x23.9
functional name	broad/intermediate	colour	mid brown	shape	
excavation no		house/tomb	tomb 55	context	
date evidence					
references	Meydum and Memphis p 6, pl. XXI, 21				
description	Joined to a. Reddish deposit on distal dorsal end.				

max length	89.9	max width	23.9	retouch	
width(quarter)	23.9	thickness(quarter)		termination	
width(half)	23.1	thickness(half)		blade part	complete
width(3 quarter)	21.9	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5388A

simple name	razor	period	Early Dynastic 0-2nd Dynasty	size	64x23.4x5.5
functional name		colour	light-mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Received by Manchester Set. 1902. Truncated top and bottom.				

max length	64	max width	23.4	retouch	truncated top and bottom, plus ventral ri
width(quarter)	22.3	thickness(quarter)	5.5	termination	
width(half)	23.4	thickness(half)	5	blade part	medial
width(3 quarter)	21.8	thickness(3 quarter)	4.5	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5388B

simple name	razor, square	period	Early Dynastic 0-2nd Dynasty	size	59.8x17.5x5
functional name		colour	light-mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Received by Manchester Set. 1902.				

max length	59.8	max width	17.5	retouch	truncated top and bottom
width(quarter)	17.5	thickness(quarter)	3.5	termination	
width(half)	17.3	thickness(half)	4.5	blade part	medial
width(3 quarter)	16.6	thickness(3 quarter)	5	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5388C

simple name	blade, retouched, lateral	period	Early Dynastic 0-2nd Dynasty	size	44.8x16.1x5.3
functional name	sickle	colour	light-mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Received by Manchester Set. 1902.				

max length	44.8	max width	16.1	retouch	truncated top and bottom
width(quarter)	14.7	thickness(quarter)	5.3	termination	
width(half)	14.4	thickness(half)	5	blade part	
width(3 quarter)	16.1	thickness(3 quarter)	4.2	segmented/truncated	truncated
wear	gloss, dorsal				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5388D

simple name	blade, unretouched	period	Early Dynastic 0-2nd Dynasty	size	58.6x20.5x3.8
functional name	broad/intermediate	colour	light-mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Received by Manchester Set. 1902.				

max length	58.6	max width	21	retouch	
width(quarter)	20.5	thickness(quarter)	3.8	termination	
width(half)	20.2	thickness(half)	3.6	blade part	proximal
width(3 quarter)	21	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5388E

simple name	blade, retouched, lateral	period	Early Dynastic 0-2nd Dynasty	size	
functional name		colour	light-mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Received by Manchester Set. 1902.				

max length	83.3	max width	21.2	retouch	dorsal, right and left
width(quarter)	19.9	thickness(quarter)	4.7	termination	
width(half)	21.2	thickness(half)	5.5	blade part	complete
width(3 quarter)	19.4	thickness(3 quarter)	5.3	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5391A

simple name	knife fragment	period	Early Dynastic 0-2nd Dynasty	size	48x27.1x7.3
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Probably a tip, not sharpened.

max length	48	max width	27.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5391B

simple name	knife fragment	period	Early Dynastic 0-2nd Dynasty	size	34.4x25x6.6
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Tip or handle.

max length	34.4	max width	25	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5391C

simple name	knife fragment	period	Early Dynastic 0-2nd Dynasty	size	41.6x35.1x7
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Blade flat one side and steep retouch round edge other.

max length	41.6	max width	35.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5391D
simple name	knife fragment	period	Early Dynastic 0-2nd Dynasty	size	61.1x49x6.3
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade fragment.				
max length	61.1	max width	49	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5391E
simple name	knife fragment	period	Early Dynastic 0-2nd Dynasty	size	61.3x49.2x7.1
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Blade fragment.				
max length	61.3	max width	49.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5391F
simple name	flake	period	Early Dynastic 0-2nd Dynasty	size	63.8x63.2x9.8
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Flake with infasive retouch on one side only.				
max length	63.8	max width	63.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5391G

simple name	knife fragment	period	Early Dynastic 0-2nd Dynasty	size	47.5x45.8x7.4
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Probably a tip.				

max length	47.5	max width	45.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Sedment	MUSEUM	Manchester	MUSEUM NO.	M6615

simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty	size	101.6x26.8x9.6
functional name	broad/intermediate	colour	mid grey	shape	broad
excavation no		house/tomb	518	context	
date evidence					
references	Label says 3 flints, copper needle, 1 alabaster dish				
description	Traces of copper. Marked 6615A.				

max length	102	max width	26.8	retouch	
width(quarter)	23.5	thickness(quarter)	9.6	termination	
width(half)	26.6	thickness(half)	8.6	blade part	complete
width(3 quarter)	26.8	thickness(3 quarter)	6.5	segmented/truncated	
wear					

PLACE	Sedment	MUSEUM	Manchester	MUSEUM NO.	M6616

simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty	size	106.6x20.5x6.7
functional name	broad/intermediate	colour	light grey/brown	shape	intermediate
excavation no		house/tomb	518	context	
date evidence					
references	Label says 3 flints, copper needle, 1 alabaster dish				
description	Marked 6615B.				

max length	107	max width	20.5	retouch	
width(quarter)	18.8	thickness(quarter)	3.7	termination	
width(half)	19.2	thickness(half)	5.1	blade part	complete
width(3 quarter)	20.5	thickness(3 quarter)	6.7	segmented/truncated	
wear					

PLACE	Sedment	MUSEUM	Manchester	MUSEUM NO.	M6617
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty	size	85.9x20.5x5.8
functional name	broad/intermediate	colour	light grey/brown	shape	broad
excavation no		house/tomb	518	context	
date evidence					
references	Label says 3 flints, copper needle, 1 alabaster dish				
description	Marked 6615C.				

max length	85.9	max width	20.5	retouch	
width(quarter)	19.4	thickness(quarter)	5.8	termination	
width(half)	20.4	thickness(half)	5.6	blade part	complete
width(3 quarter)	20.5	thickness(3 quarter)	5.3	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M5389A
simple name	blade, retouched	period	Early Dynastic 0-2nd Dynasty	size	77.2x21.3x6
functional name	Intermediate	colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	77.2	max width	21.3	retouch	truncated proximal and distal and notche
width(quarter)	21.3	thickness(quarter)	6	termination	
width(half)	20.2	thickness(half)	6	blade part	medial
width(3 quarter)	17.5	thickness(3 quarter)	5.9	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M5389B
simple name	blade, unretouched	period	Early Dynastic 0-2nd Dynasty	size	73.3x21.4x3.6
functional name	Intermediate	colour	light brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	73.3	max width	21.4	retouch	
width(quarter)	21.4	thickness(quarter)	3.2	termination	
width(half)	20.8	thickness(half)	3.6	blade part	
width(3 quarter)	20.2	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M5389C
simple name	blade, retouched, lateral	period	Early Dynastic 0-2nd Dynasty	size	42.1x26x7.4
functional name		colour	light brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	42.1	max width	26	retouch	dorsal, left
width(quarter)	26	thickness(quarter)	7.4	termination	
width(half)	23.4	thickness(half)	6.9	blade part	distal
width(3 quarter)	23.5	thickness(3 quarter)	5.3	segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Manchester	MUSEUM NO.	M5389D
simple name	blade, retouched, lateral	period	Early Dynastic 0-2nd Dynasty	size	51.5x19.1x5.1
functional name		colour	light brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51.5	max width	19.1	retouch	steep retouch dorsal left and shallow dor
width(quarter)	19.1	thickness(quarter)	3.6	termination	
width(half)	18.8	thickness(half)	5.1	blade part	medial
width(3 quarter)	17.1	thickness(3 quarter)	3.1	segmented/truncated	seg + trunc
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6771A
simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	93.5x14.7x4.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	?341	context	
date evidence					
references					
description					

max length	93.5	max width	14.7	retouch	
width(quarter)	14.7	thickness(quarter)	3.3	termination	
width(half)	14.2	thickness(half)	4.3	blade part	complete
width(3 quarter)	12.7	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6771B

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	53.7x9.4x3.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	?341	context	

date evidence

references

description

max length	53.7	max width	9.4	retouch	
width(quarter)	8.1	thickness(quarter)	1.9	termination	
width(half)	9.4	thickness(half)	3	blade part	distal
width(3 quarter)	9.3	thickness(3 quarter)	3.8	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6772A

simple name	razor	period	Early Dynastic, 1st Dynasty	size	54x22.2x3.2
functional name		colour	light brown	shape	broad
excavation no		house/tomb	?341	context	

date evidence

references

description

max length	54	max width	22.2	retouch	
width(quarter)	21.7	thickness(quarter)	3	termination	
width(half)	22.2	thickness(half)	3.2	blade part	
width(3 quarter)	21.5	thickness(3 quarter)	3.1	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6772B

simple name	razor	period	Early Dynastic, 1st Dynasty	size	59.8x29.5x5.4
functional name		colour	light brown	shape	broad
excavation no		house/tomb	?341	context	

date evidence

references

description

max length	59.8	max width	29.5	retouch	
width(quarter)	26.8	thickness(quarter)	4.5	termination	
width(half)	29.5	thickness(half)	5.4	blade part	
width(3 quarter)	29.5	thickness(3 quarter)	5.1	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6772C

simple name	razor	period	Early Dynastic, 1st Dynasty	size	66x29.9x5.2
functional name		colour	light brown	shape	broad
excavation no		house/tomb	?341	context	

date evidence

references

description

max length	66	max width	29.9	retouch	
width(quarter)	27.3	thickness(quarter)	4.7	termination	
width(half)	29.9	thickness(half)	5.1	blade part	
width(3 quarter)	29.4	thickness(3 quarter)	5.2	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6772D

simple name	razor	period	Early Dynastic, 1st Dynasty	size	54.9x18.4x6.6
functional name		colour	light brown	shape	broad
excavation no		house/tomb	?341	context	

date evidence

references

description Traces of ochre.

max length	54.9	max width	18.4	retouch	
width(quarter)	16.9	thickness(quarter)	5.8	termination	
width(half)	18.4	thickness(half)	6.5	blade part	
width(3 quarter)	18.2	thickness(3 quarter)	6.6	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6772F

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	53.6x18.9x4.3
functional name		colour	light brown	shape	
excavation no		house/tomb	?341	context	

date evidence

references

description

max length	53.6	max width	19.3	retouch	
width(quarter)	18.7	thickness(quarter)	4.3	termination	
width(half)	18.9	thickness(half)	3.5	blade part	
width(3 quarter)	19.3	thickness(3 quarter)	3.6	segmented/truncated	

wear

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7068A

simple name	blade, retouched, lateral	period	Early Dynastic, 2nd Dynasty-Ol	size	67.9x34.6x7
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'.				

max length	67.9	max width	34.6	retouch	dorsal and distal
width(quarter)	33.7	thickness(quarter)	7	termination	
width(half)	34.6	thickness(half)	6.5	blade part	distal
width(3 quarter)	34.2	thickness(3 quarter)	6.1	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7068B

simple name	blade, retouched, lateral	period	Early Dynastic, 2nd Dynasty-Ol	size	59.5x25.7x7.4
functional name		colour	mid grey	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'.				

max length	59.5	max width	25.7	retouch	dorsal and distal
width(quarter)	25.7	thickness(quarter)	7.3	termination	
width(half)	25.4	thickness(half)	7.4	blade part	distal
width(3 quarter)	24	thickness(3 quarter)	6.5	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7069A

simple name	blade, retouched	period	Early Dynastic, 2nd Dynasty-Ol	size	21.6x13.3x3.7
functional name		colour	very dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'.				

max length	21.6	max width	13.3	retouch	serrations
width(quarter)		thickness(quarter)		termination	
width(half)	13.3	thickness(half)	3.7	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear	gloss dorsal and ventral				

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7069B

simple name	blade, retouched	period	Early Dynastic, 2nd Dynasty-Ol	size	54.2x10.6x4
functional name		colour	orange	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'.				

max length	54.2	max width	10.6	retouch	serrations, lateral
width(quarter)	10.6	thickness(quarter)	3.3	termination	
width(half)	10.3	thickness(half)	4	blade part	distal
width(3 quarter)	9.2	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7072A

simple name	flake, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	62.6x34.3x5.6
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'.				

max length	62.6	max width	34.3	retouch	
width(quarter)	34.3	thickness(quarter)	3.3	termination	
width(half)	30.3	thickness(half)	5.6	blade part	complete
width(3 quarter)	28.1	thickness(3 quarter)	4.8	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7072B

simple name	flake	period	Early Dynastic, 2nd Dynasty-Ol	size	40.9x18.5x3.1
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'.				

max length	40.9	max width	18.5	retouch	
width(quarter)	17.2	thickness(quarter)	3.1	termination	
width(half)	18.5	thickness(half)	2.4	blade part	complete
width(3 quarter)	16.9	thickness(3 quarter)	2	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7072C
simple name	flake	period	Early Dynastic, 2nd Dynasty-Ol	size	68x27x9.1
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429', overhang removed.				

max length	68	max width	27	retouch	
width(quarter)	27	thickness(quarter)	6	termination	
width(half)	24	thickness(half)	7.2	blade part	complete
width(3 quarter)	22.2	thickness(3 quarter)	9.1	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7072D
simple name	flake	period	Early Dynastic, 2nd Dynasty-Ol	size	50x30.2x5
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429', overhang removed.				

max length	50	max width	30.2	retouch	
width(quarter)	28.2	thickness(quarter)	5	termination	
width(half)	30.2	thickness(half)	3.6	blade part	complete
width(3 quarter)	23.9	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7072E
simple name	blade, crested	period	Early Dynastic, 2nd Dynasty-Ol	size	74x24.7x4.2
functional name		colour	mid orange/brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429', lip.				

max length	74	max width	24.7	retouch	
width(quarter)	24.7	thickness(quarter)	4	termination	
width(half)	23.8	thickness(half)	4.2	blade part	complete
width(3 quarter)	23.4	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38000)

simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	60.5x25.1x9.3
functional name	broad/intermediate	colour	banded mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	60.5	max width	25.1	retouch	
width(quarter)	22.7	thickness(quarter)	8.2	termination	
width(half)	25.1	thickness(half)	9	blade part	proximal
width(3 quarter)	24.2	thickness(3 quarter)	9.3	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38001A)

simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	77x18.1x7.1
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	77	max width	18.1	retouch	
width(quarter)	17.8	thickness(quarter)	5.4	termination	
width(half)	18.1	thickness(half)	5.6	blade part	complete
width(3 quarter)	17.7	thickness(3 quarter)	7.1	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38003)

simple name	blade, retouched	period	Early Dynastic, 2nd Dynasty-Ol	size	105.6x19x6.2
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	106	max width	19	retouch	dorsal right and ventral left
width(quarter)	16.4	thickness(quarter)	4.4	termination	
width(half)	17.7	thickness(half)	5.9	blade part	complete
width(3 quarter)	19	thickness(3 quarter)	6.2	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38002)

simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	87.2x22.1x11.7
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description Marked '23/429'

max length	87.2	max width	22	retouch	
width(quarter)	22	thickness(quarter)	11.7	termination	
width(half)	22.1	thickness(half)	9.8	blade part	complete
width(3 quarter)	17.8	thickness(3 quarter)	6.8	segmented/truncated	

wear

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38004)

simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	95.9x17.1x8
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description Marked '23/429'

max length	95.9	max width	17.1	retouch	
width(quarter)	16.1	thickness(quarter)	4.9	termination	
width(half)	17.1	thickness(half)	7.4	blade part	complete
width(3 quarter)	17.1	thickness(3 quarter)	8	segmented/truncated	

wear

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38005)

simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	108.7x22.3x6.3
functional name	broad/intermediate	colour	mid orange/brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description Marked '23/429'

max length	109	max width	22.3	retouch	
width(quarter)	22.3	thickness(quarter)	3.5	termination	
width(half)	21.7	thickness(half)	5.1	blade part	complete
width(3 quarter)	19.1	thickness(3 quarter)	6.3	segmented/truncated	

wear

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38006)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	61.5x21.2x7.2
functional name	broad/intermediate	colour	mid grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	61.5	max width	21.2	retouch	
width(quarter)	18.7	thickness(quarter)	5.7	termination	
width(half)	18.7	thickness(half)	6.5	blade part	proximal
width(3 quarter)	21.2	thickness(3 quarter)	7.2	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7071(38007)
simple name	blade, retouched	period	Early Dynastic, 2nd Dynasty-Ol	size	27.4x10.4x5.3
functional name		colour	mid-dark grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	27.4	max width	10.4	retouch	dorsal and ventral retouch right and left
width(quarter)		thickness(quarter)		termination	
width(half)	10.4	thickness(half)	5.3	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38008)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	53.7x13.3x3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	53.7	max width	13.3	retouch	
width(quarter)	12.7	thickness(quarter)	2.7	termination	
width(half)	13.1	thickness(half)	2.9	blade part	proximal
width(3 quarter)	13.3	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38009)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	66.9x16.2x3.9
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				
max length	66.9	max width	16.2	retouch	
width(quarter)	15.4	thickness(quarter)	3.8	termination	
width(half)	16.2	thickness(half)	3.9	blade part	complete
width(3 quarter)	15.9	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38010)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	70x10.3x3.8
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				
max length	70	max width	10.3	retouch	
width(quarter)	10.2	thickness(quarter)	2.4	termination	
width(half)	10	thickness(half)	2.6	blade part	complete
width(3 quarter)	10.3	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38011)
simple name	blade, crested	period	Early Dynastic, 2nd Dynasty-Ol	size	81x18.2x5
functional name		colour	mid brown	shape	inermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				
max length	81	max width	18.2	retouch	
width(quarter)	13.3	thickness(quarter)	4.8	termination	
width(half)	17	thickness(half)	5	blade part	complete
width(3 quarter)	18.2	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38012)
simple name	blade, retouched, end?	period	Early Dynastic, 2nd Dynasty-Ol	size	65.7x10x2.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	65.7	max width	10	retouch	end sharpened?
width(quarter)	10	thickness(quarter)	2.4	termination	
width(half)	10	thickness(half)	2.2	blade part	complete
width(3 quarter)	8.7	thickness(3 quarter)	2.1	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38014)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	68x14.8x3.5
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	68	max width	14.8	retouch	
width(quarter)	14.8	thickness(quarter)	3.5	termination	
width(half)	13.7	thickness(half)	3.3	blade part	proximal
width(3 quarter)	10.7	thickness(3 quarter)	3.2	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38013)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	77.1x16.5x4.6
functional name	broad/intermediate	colour	mid brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	77.1	max width	16.5	retouch	
width(quarter)	15.6	thickness(quarter)	4.6	termination	
width(half)	16.5	thickness(half)	4.5	blade part	complete
width(3 quarter)	15.8	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38015)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	40.6x8.9x2.7
functional name	broad/intermediate	colour	mid brown banded	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	40.6	max width	8.9	retouch	
width(quarter)	8.9	thickness(quarter)	2.2	termination	
width(half)	8.9	thickness(half)	2.3	blade part	medial
width(3 quarter)	8.6	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38016)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	80.9x12.9x4.7
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	80.9	max width	12.9	retouch	
width(quarter)	12.9	thickness(quarter)	4.2	termination	
width(half)	12.2	thickness(half)	4.7	blade part	complete
width(3 quarter)	10	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38017)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	53x11.8x3.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				

max length	53	max width	11.8	retouch	
width(quarter)	11.8	thickness(quarter)	3.3	termination	
width(half)	9.9	thickness(half)	2.7	blade part	proximal
width(3 quarter)	8.8	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38018)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	65.6x11.7x2.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				
max length	65.6	max width	11.7	retouch	
width(quarter)	11.7	thickness(quarter)	2.8	termination	
width(half)	9.1	thickness(half)	2.9	blade part	complete
width(3 quarter)	9.6	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38019)
simple name	blade, retouched	period	Early Dynastic, 2nd Dynasty-Ol	size	90x12x3.1
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				
max length	90	max width	12	retouch	dorsal and ventral, roght and left
width(quarter)	12	thickness(quarter)	2.6	termination	
width(half)	10.1	thickness(half)	3.1	blade part	complete
width(3 quarter)	10.3	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38020)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	58.2x17x5.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				
max length	58.2	max width	17	retouch	
width(quarter)	17	thickness(quarter)	5	termination	
width(half)	17	thickness(half)	5.4	blade part	distal
width(3 quarter)	16.2	thickness(3 quarter)	5.3	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38021)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	66.2x13.6x4.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'				
max length	66.2	max width	13.6	retouch	
width(quarter)	12.6	thickness(quarter)	3.6	termination	
width(half)	13.6	thickness(half)	4.2	blade part	proximal
width(3 quarter)	13.4	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7070(38022)
simple name	blade, unretouched	period	Early Dynastic, 2nd Dynasty-Ol	size	45.2x13.1x4.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'. Previous hinge fractures.				
max length	45.2	max width	13.1	retouch	
width(quarter)	13.1	thickness(quarter)	4.1	termination	
width(half)	11	thickness(half)	4.5	blade part	proximal
width(3 quarter)	10.2	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7073A(38023)
simple name	razor, square	period	Early Dynastic, 2nd Dynasty-Ol	size	65.6x27.4x7.7
functional name		colour	mid orange/brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Marked '23/429'. Square ends.				
max length	65.6	max width	27.4	retouch	
width(quarter)	23.9	thickness(quarter)	5.5	termination	
width(half)	25.9	thickness(half)	7.3	blade part	medial
width(3 quarter)	27.4	thickness(3 quarter)	7.7	segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M1103(38074)
simple name	core?	period	Old Kingdom, 3rd Dynasty	size	60.3x51.3x29.1
functional name		colour	mid brown (shiny s	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Bet Khallef	MUSEUM	Manchester	MUSEUM NO.	M38075
simple name	core?	period	Old Kingdom, 3rd Dynasty	size	
functional name		colour	dark brown (patinat	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2503
simple name	debitage	period	New Kingdom, 18th Dynasty	size	65.2x19x14.7
functional name		colour	light-mid grey	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the ‘heap in the south end of the town’ (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Debitage from blade core. Jesse Howarth collection (from Petrie 1891-2).				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2504
simple name	debitage	period	New Kingdom, 18th Dynasty	size	54.2x30.4x7.2
functional name		colour	mid red brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2505
simple name	debitage	period	New Kingdom, 18th Dynasty	size	61.2x22.6x8.1
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	blade debitage with retouch Jesse Howarth collection (from Petrie 1891-2).				

max length		max width		retouch	dorsal and ventral
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	complete
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2500
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	62.6x23.9x5.8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	62.6	max width	23.9	retouch	
width(quarter)	23.9	thickness(quarter)	5.8	termination	
width(half)	22.5	thickness(half)	5.3	blade part	complete
width(3 quarter)	22.1	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2501
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	66.8x22.1x9.2
functional name		colour	mid brown/grey	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	66.8	max width	22.1	retouch	
width(quarter)	22.1	thickness(quarter)	7.4	termination	
width(half)	19.9	thickness(half)	9.2	blade part	complete
width(3 quarter)	21	thickness(3 quarter)	9	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2502
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	68.3x27.7x8.1
functional name		colour	mid grey	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	68.3	max width	27.7	retouch	
width(quarter)	18.9	thickness(quarter)	5.1	termination	
width(half)	21.2	thickness(half)	4.4	blade part	complete
width(3 quarter)	27.7	thickness(3 quarter)	8.1	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2506
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	55.2x14.8x6.8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	55.2	max width	14.8	retouch	
width(quarter)	14.8	thickness(quarter)	6.8	termination	
width(half)	12.3	thickness(half)	6.7	blade part	complete
width(3 quarter)	11.8	thickness(3 quarter)	5.8	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2507
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	83.8x21.1x8.5
functional name		colour	mid grey/brown	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	83.8	max width	21.1	retouch	
width(quarter)	21.1	thickness(quarter)	7.9	termination	
width(half)	17.2	thickness(half)	7.9	blade part	complete
width(3 quarter)	15.1	thickness(3 quarter)	8.5	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2508
simple name	blade, crested	period	New Kingdom, 18th Dynasty	size	99.3x20x18.5
functional name		colour	mid grey	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2). Double crested.				

max length	99.3	max width	20	retouch	
width(quarter)	20	thickness(quarter)	11	termination	
width(half)	18.2	thickness(half)	12.2	blade part	complete
width(3 quarter)	18.1	thickness(3 quarter)	18.5	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2509
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	47.4x28x9.1
functional name		colour	light-mid grey	shape	irregular
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2). Made on tabular flint (cortex right angled).				

max length	47.4	max width	28	retouch	
width(quarter)	28	thickness(quarter)	9.1	termination	
width(half)	15.7	thickness(half)	8.4	blade part	distal
width(3 quarter)	14	thickness(3 quarter)	6.5	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2510

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty		size	72.9x25.5x7	
functional name			colour		shape	irregular	
excavation no			house/tomb		context	Central City, du	
date evidence							
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.						
description	Jesse Howarth collection (from Petrie 1891-2).						
max length	72.9	max width	25.5	retouch			
width(quarter)	23.7	thickness(quarter)	7		termination		
width(half)	22.9	thickness(half)	6.5		blade part	complete	
width(3 quarter)	25.5	thickness(3 quarter)	5		segmented/truncated		
wear							

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2511

simple name	flake	period	New Kingdom, 18th Dynasty		size	71.6x42.4x6.6	
functional name			colour	light-mid grey	shape		
excavation no			house/tomb		context	Central City, du	
date evidence							
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.						
description	Jesse Howarth collection (from Petrie 1891-2).						
max length	71.6	max width	42.4	retouch			
width(quarter)	31.7	thickness(quarter)	6		termination		
width(half)	40.6	thickness(half)	5.8		blade part	complete	
width(3 quarter)	37.3	thickness(3 quarter)	6.6		segmented/truncated		
wear							

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2512

simple name	flake	period	New Kingdom, 18th Dynasty		size	76.1x44.4	
functional name			colour	light-mid brown	shape		
excavation no			house/tomb		context	Central City, du	
date evidence							
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.						
description	Jesse Howarth collection (from Petrie 1891-2). Previous hinge removals.						
max length	76.1	max width	44.4	retouch			
width(quarter)	44.4	thickness(quarter)	12		termination		
width(half)	41.7	thickness(half)	11.7		blade part	complete	
width(3 quarter)	35.2	thickness(3 quarter)	14.6		segmented/truncated		
wear							

PLACE	Amarna	MUSEUM	Liverpool	MUSEUM NO.	L56.21.763
simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	107.5x30.1x8
functional name		colour	mid brown	shape	intermediate
excavation no		house/tomb	North Granary	context	Norh City
date evidence					
references					
description	North Granary NP23/28 1924-5 155.				

max length	108	max width	30.1	retouch	dorsal, both lateral edges
width(quarter)	28.7	thickness(quarter)	6.8	termination	
width(half)	30.1	thickness(half)	6.5	blade part	
width(3 quarter)	23.5	thickness(3 quarter)	8	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Liverpool	MUSEUM NO.	L56.21.766
simple name	blade, end sickle	period	New Kingdom, 18th Dynasty	size	55.4x29.7x8.5
functional name	sickle, end	colour	mid grey-brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	55.4	max width	29.7	retouch	dorsal denticulation one side. Dorsal trun
width(quarter)	29.7	thickness(quarter)	6.1	termination	
width(half)	26.7	thickness(half)	7.6	blade part	
width(3 quarter)	23	thickness(3 quarter)	8.5	segmented/truncated	truncated
wear	gloss, dorsal				

PLACE	Amarna	MUSEUM	Liverpool	MUSEUM NO.	L56.21.767
simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	78.6x25.7x7.9
functional name		colour	mid orange brown	shape	
excavation no		house/tomb	North Granary	context	
date evidence					
references					
description	North Granary NP23/25.				

max length	78.6	max width	28.5	retouch	
width(quarter)	28.3	thickness(quarter)	7.5	termination	
width(half)	28.5	thickness(half)	7.9	blade part	
width(3 quarter)	25.7	thickness(3 quarter)	12.2	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Liverpool	MUSEUM NO.	L56.21.768

simple name	blade, retouched	period	New Kingdom, 18th Dynasty	size	79.6x19.9x5
functional name		colour	streaked brown an	shape	intermediate
excavation no		house/tomb	North Granary	context	

date evidence	
references	
description	North Granary.

max length	79.6	max width	19.9	retouch	dorsal retouch one side and backed othe		
width(quarter)	16.2	thickness(quarter)	3.8			termination	
width(half)	19.9	thickness(half)	5			blade part	complete
width(3 quarter)	18.5	thickness(3 quarter)	5			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Liverpool	MUSEUM NO.	L56.21.769

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	92.2x30.4x8.5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Liverpool	MUSEUM NO.	L56.21.771

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	69.5x23.3x3.2
functional name		colour	orange/brown	shape	
excavation no		house/tomb	North Palace, room	context	

date evidence	
references	
description	Presumed to be the flint on the Amarna database said to be in East Anglia. This group came from Norwich Castle Museum. Additionally, the flint on the Amarna datbase is from the North Palace (as is that in Liverpool). The Amarna database gives the additional information as being from the 'woman's quarters' room 1 found in a box.

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L1973.2.269A
simple name	blade	period	Middle Kingdom, 12th Dynasty	size	80.7x17,8x7.4
functional name		colour	mid grey-brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	80.7	max width	17.8	retouch	
width(quarter)	17.8	thickness(quarter)	6.9	termination	
width(half)	17.4	thickness(half)	7.4	blade part	complete
width(3 quarter)	16.2	thickness(3 quarter)	6.8	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2513
simple name	flake	period	New Kingdom, 18th Dynasty	size	48.4x46.5
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the ‘heap in the south end of the town’ (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	48.4	max width	46.5	retouch	
width(quarter)	42	thickness(quarter)	12.5	termination	feathered
width(half)	46.5	thickness(half)	11.7	blade part	complete
width(3 quarter)	43.7	thickness(3 quarter)	11.2	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2514
simple name	flake, retouched	period	New Kingdom, 18th Dynasty	size	75.8x34.2x5
functional name		colour	mid grey/brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the ‘heap in the south end of the town’ (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	75.8	max width	34.2	retouch	dorsal
width(quarter)	34.2	thickness(quarter)	4.3	termination	
width(half)	31.7	thickness(half)	5	blade part	complete
width(3 quarter)	22.6	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2515
simple name	flake, unretouched	period	New Kingdom, 18th Dynasty	size	71x36.5x9.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	71	max width	36.5	retouch	
width(quarter)		thickness(quarter)	9.4	termination	
width(half)		thickness(half)	8.5	blade part	
width(3 quarter)		thickness(3 quarter)	5.5	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2516
simple name	flake, retouched	period	New Kingdom, 18th Dynasty	size	88.5x59.3x13.5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	88.5	max width	59.3	retouch	dorsal
width(quarter)		thickness(quarter)	12.4	termination	
width(half)		thickness(half)	13.5	blade part	
width(3 quarter)		thickness(3 quarter)	6	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2517
simple name	flake	period	New Kingdom, 18th Dynasty	size	51.5x49.5x7.9
functional name		colour	mid pink/brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the 'heap in the south end of the town' (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	51.1	max width	49.5	retouch	
width(quarter)		thickness(quarter)	7.9	termination	
width(half)		thickness(half)	6.3	blade part	
width(3 quarter)		thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2518
simple name	flake	period	New Kingdom, 18th Dynasty	size	80.9x59.1x9.2
functional name		colour	mid orange/brown	shape	
excavation no		house/tomb		context	Central City, du
date evidence					
references	Presumed to be from the ‘heap in the south end of the town’ (Spurrell 1894, 37) as this is where Spurrell statesnon-sickle blades were found.				
description	Jesse Howarth collection (from Petrie 1891-2).				

max length	80.9	max width	59.1	retouch	
width(quarter)		thickness(quarter)	9.2	termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)	5.4	segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2496
simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	30.5x23.9x4.9
functional name	sickle	colour	mid grey	shape	
excavation no		house/tomb		context	Central City, Pal
date evidence					
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.				
description	Jesse Howarth collection (from Petrie 1891-2). One end broken, other has steep retouch. Back is abraded and cutting end serrated.				

max length	30.5	max width	23.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	seg + trunc
wear	gloss				

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2497
simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	64.2x21.5x5
functional name	sickle, end	colour	mid orange/brown	shape	
excavation no		house/tomb		context	Central City, Pal
date evidence					
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.				
description	Jesse Howarth collection (from Petrie 1891-2). Mastic attached. Serrations along edge. Retouch o back, steep.				

max length	64.2	max width	21.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2498
simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	36.2x16.9x4.1
functional name	sickle	colour	light orange/brown	shape	
excavation no		house/tomb		context	Central City, Pal
date evidence					
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.				
description	Jesse Howarth collection (from Petrie 1891-2). Serrated. Steep retouch along 'back'				

max length	36.2	max width	16.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M2499
simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	48.7x16.5x5.9
functional name	sickle	colour		shape	
excavation no		house/tomb		context	Central City, Pal
date evidence					
references	Presumed from Palace 'waste heaps' in the Central City see Spurrell 1894, 37 and Kemp and Garfi 1993, 63-65.				
description	Jesse Howarth collection (from Petrie 1891-2). Both ends broken. Cortex on 'back' and retotouch not seration on cutting edge.				

max length	48.7	max width	16.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	segmented
wear					

PLACE	Amarna	MUSEUM	Manchester	MUSEUM NO.	M11542
simple name	debitage	period	New Kingdom, 18th Dynasty	size	57.3x29.2x8.4
functional name		colour	mid grey/brown	shape	
excavation no		house/tomb	TA NC 81 133	context	North City
date evidence					
references					
description	1983-84 excavation by EES. This is from the North City 1981 excavation published by Kemp 1983. On page 20 'a collection of worked flint tools' is mentioned.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4874

simple name	blade, unretouched	period	New Kingdom, 18th Dynasty	size	61.7x11.4x5.7
functional name		colour	chocolate brown	shape	intermediate
excavation no		house/tomb		context	

date evidence

references

description

max length	61.7	max width	12.1	retouch	
width(quarter)	11.4	thickness(quarter)	2.7	termination	hinge
width(half)	12.1	thickness(half)	4	blade part	complete
width(3 quarter)	12.1	thickness(3 quarter)	5.7	segmented/truncated	

wear

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/1

simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	

date evidence

references: Meidum pl. XXIX 20,21.

description: 10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.

max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/2

simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	

date evidence

references: Meidum pl. XXIX 20,21.

description: 10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.

max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/3
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				
max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/4
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				
max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/5
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				
max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/6
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				
max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/7
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				
max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/8
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				
max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/9
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				

max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/10
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	
functional name	broad/intermediate	colour		shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description	10 blades together measuring 86-95mmx16-28mm. Distal ends have been de-cortexed. Is this because the distal ends were to be used? Not cosmetic as lateral cortex remains.				

max length		max width		retouch	distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/11
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	87.9x33.8x8.4
functional name	broad/intermediate	colour	banded mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description					

max length	87.9	max width	33.8	retouch	
width(quarter)	22	thickness(quarter)	7.8	termination	
width(half)	33.8	thickness(half)	8.4	blade part	complete
width(3 quarter)	18.8	thickness(3 quarter)	5.7	segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/12
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	94.9x33.4x11
functional name	broad/intermediate	colour	banded mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description					

max length	94.9	max width	33.4	retouch	distal
width(quarter)	27.5	thickness(quarter)	7.5	termination	
width(half)	30.2	thickness(half)	9.8	blade part	proximal
width(3 quarter)	33.4	thickness(3 quarter)	11	segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/13
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	102.2x23.2x8.6
functional name	broad/intermediate	colour	banded mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description					

max length	102	max width	23.2	retouch	distal
width(quarter)	21.5	thickness(quarter)	7.5	termination	
width(half)	23.1	thickness(half)	8.5	blade part	proximal
width(3 quarter)	23.2	thickness(3 quarter)	8.6	segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Manchester	MUSEUM NO.	M2242/14
simple name	blade, unretouched/Inter	period	Old Kingdom, 3rd Dynasty	size	83.2x21.4x7.1
functional name	broad/intermediate	colour	banded mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references	Meidum pl. XXIX 20,21. 10 blades together measuring 86-95mmx16-28mm.				
description					

max length	83.2	max width	21.4	retouch	distal
width(quarter)	18.1	thickness(quarter)	5	termination	
width(half)	20.3	thickness(half)	7	blade part	proximal
width(3 quarter)	21.4	thickness(3 quarter)	7.1	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6771C

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	79.8x18.4x6.6
functional name	broad/intermediate	colour	pale brown	shape	narrow
excavation no	Grave 341?	house/tomb		context	
date evidence					
references					
description					

max length	79.8	max width	18.4	retouch	
width(quarter)	18.4	thickness(quarter)	4.4	termination	
width(half)	17.3	thickness(half)	6.4	blade part	
width(3 quarter)	13.4	thickness(3 quarter)	6.6	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6772G

simple name	razor, round	period	Early Dynastic, 1st Dynasty	size	66.2x29.6x5.5
functional name		colour	chocolate brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	66.2	max width	29.6	retouch	
width(quarter)	29.6	thickness(quarter)	5.5	termination	
width(half)	29.5	thickness(half)	5.5	blade part	complete
width(3 quarter)		thickness(3 quarter)	5.5	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6768A

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	75.4x14.2x3.5
functional name		colour		shape	narrow
excavation no	Grave 341	house/tomb		context	
date evidence					
references					
description					

max length	75.4	max width	14.2	retouch	
width(quarter)	14.2	thickness(quarter)	3.3	termination	
width(half)	12.3	thickness(half)	3.5	blade part	complete
width(3 quarter)	8.9	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6768c

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	76.4x14.2x3.5
functional name		colour		shape	narrow
excavation no	Grave 341	house/tomb		context	
date evidence					
references					
description					

max length	76.4	max width	14.2	retouch	
width(quarter)	14.2	thickness(quarter)	3.4	termination	
width(half)	13.9	thickness(half)	3.3	blade part	complete
width(3 quarter)	10.8	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Qau	MUSEUM	Manchester	MUSEUM NO.	M7332

simple name	blade, retouched, lateral	period	Old Kingdom, 6th Dynasty	size	
functional name	sickle	colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	24/1959. Serrated.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear	gloss				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5619

simple name	razor, round	period	Early Dynastic, 1st Dynasty	size	69.9x30.5x5.7
functional name		colour	chocolate brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references	Peet 1914, pl. IX,1; p34				
description					

max length	69.9	max width	30.5	retouch	
width(quarter)	30.5	thickness(quarter)	5.7	termination	
width(half)	30.5	thickness(half)	5.7	blade part	
width(3 quarter)		thickness(3 quarter)	5.7	segmented/truncated	
wear					

PLACE	Tarkhan	MUSEUM	Manchester	MUSEUM NO.	M5734

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	51.5x21.2x5.8
functional name		colour	mid grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51.5	max width	21.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.8			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	seg + trunc
wear							

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4820

simple name	blade, retouched, lateral	period	Early Dynastic, 1st Dynasty	size	92.5x26x5.1
functional name		colour	pale brown	shape	broad?
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	92.5	max width	26	retouch	dorsal, lateral edges		
width(quarter)	26	thickness(quarter)	4.6			termination	
width(half)	25.7	thickness(half)	5.1			blade part	complete
width(3 quarter)	24.3	thickness(3 quarter)	4.5			segmented/truncated	
wear							

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4822

simple name	scraper, triangular	period	Early Dynastic, 1st Dynasty	size	26.2x46.4x2.9
functional name		colour	pale brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Traces of ochre.				

max length	26.2	max width	46.4	retouch	dorsal		
width(quarter)		thickness(quarter)				termination	
width(half)	46.4	thickness(half)	2.9			blade part	complete
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4825

simple name	blade, unretouched	period	Early Dynastic, 1st Dynasty	size	79.5x10x3.6
functional name		colour	pale brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	79.5	max width	10	retouch	
width(quarter)	9.8	thickness(quarter)	3.4	termination	
width(half)	10	thickness(half)	3.6	blade part	complete
width(3 quarter)	9.1	thickness(3 quarter)	3.3	segmented/truncated	

wear

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4826

simple name	scraper, triangular	period	Early Dynastic, 1st Dynasty	size	39.8x37.5x4.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Steep dorsal retouch.

max length	39.8	max width	37.5	retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4827

simple name	blade, retouched/scraper	period	Early Dynastic, 1st Dynasty	size	43.9x22.2x3.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Traces of ochre.

max length	43.9	max width	22.2	retouch	dorsal
width(quarter)	20.7	thickness(quarter)	3.7	termination	
width(half)	22.2	thickness(half)	2.7	blade part	proximal
width(3 quarter)	21.5	thickness(3 quarter)	2.8	segmented/truncated	

wear

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4228

simple name	flake	period	Early Dynastic, 1st Dynasty	size	45.5x40.5x5
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description Ochre.

max length	45.5	max width	40.5	retouch	ventral
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Giza	MUSEUM	Manchester	MUSEUM NO.	M4830

simple name	blade	period	Early Dynastic, 1st Dynasty	size	41.8x21.1x6.1
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	

date evidence

references

description Traces of copper.

max length	41.8	max width	21.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.1	blade part	distal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Esna	MUSEUM	Manchester	MUSEUM NO.	M5901

simple name	knife, OK5 or OK6	period	?	size	153.2x63x8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description 9' in pencil. Positive Seitenbezogenheit.

max length	153	max width	63	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Naqada	MUSEUM	Manchester	MUSEUM NO.	M1009

simple name	knife, OK6	period	Old Kingdom, 4th Dynasty?	size	176x46x9
functional name		colour	mid brown	shape	
excavation no	Found in bottom of temple	house/tomb		context	
date evidence					
references					
description	Flatter on one side than other Positive Seitenbezogenheit.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6774

simple name	knife, OK4	period	Early Dynastic, 1st Dynasty	size	17.4x43.5x6
functional name		colour	pale brown	shape	
excavation no	414	house/tomb		context	
date evidence					
references					
description	Shaped with blade pointing away from manufacturer. Broken Positive Seitenbezogenheit. Hollow back, hook handle.				

max length	17.4	max width	43.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M6773

simple name	knife, OK4	period	Early Dynastic, 1st Dynasty	size	295x40
functional name		colour	mid grey	shape	
excavation no	414	house/tomb		context	
date evidence					
references					
description	Positive Seitenbezogenheit, blade and handle. Hollow back. This example in overall (long and thin, and shape of the handle is similar to that from Elephantine published by Dreyer (Dreyer 1986, 87, fig 45.351), though this was 44 cm long. The heavy resharpening may suggest long life use prior to deposition.				

max length	295	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5382A

simple name	scraper, round/oval	period	Early Dynastic, 0-II Dynasty	size	99.6x55.8x10.5
functional name		colour	orange/brown	shape	
excavation no		house/tomb		context	

date evidence

references

description: Flat scraper.

max length	101	max width		retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5382B

simple name	scraper	period	Early Dynastic, 0-II Dynasty	size	100.8x57.8x6.7
functional name		colour	orange/brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length		max width		retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5382C

simple name	knife tip	period	Early Dynastic, 0-II Dynasty	size	66.7x34.9x7.6
functional name		colour	orange/brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5383A

simple name	knife, OK	period	Early Dynastic, 0-II Dynasty	size	133.9x37.2x8.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Crude knife with gloss. Flatter on one side than other.				

max length	134	max width	37.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear	gloss				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5383B

simple name	knife handle, hook	period	Early Dynastic, 0-II Dynasty	size	39x19.3x7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Hook shaped knife handle Positive Seitenbezogenheit.				

max length		max width	19.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5383C

simple name	blade, retouched	period	Early Dynastic, 0-II Dynasty	size	90x27.2x8
functional name		colour	mid brown	shape	irregular
excavation no		house/tomb		context	
date evidence					
references					
description	Retouched blade or crude knife.				

max length	90	max width	27.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5385A

simple name	scraper, circular	period	Early Dynastic, 0-II Dynasty	size	62.7x55.2x9
functional name		colour	mid brown-chocolat	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Circular scraper.

max length	62.7	max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5385B. Reused, (pati

simple name	scraper, triangular	period	Early Dynastic, 0-II Dynasty	size	57.1x61.6x8.9
functional name		colour	mid brown-chocolat	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Retouched triangular flake.

max length	57.1	max width		retouch	dorsal		
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5385C

simple name	scraper, circular	period	Early Dynastic, 0-II Dynasty	size	50.3x58.9x8.5
functional name		colour	mid brown-chocolat	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	Reused (patina cut through).

max length	50.3	max width		retouch	dorsal		
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5385D

simple name	scraper, oval	period	Early Dynastic, 0-II Dynasty	size	48.5x37.9x11
functional name		colour	pale brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	48.5	max width		retouch	dorsal
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)			blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5385E

simple name	debitage	period	Early Dynastic, 0-II Dynasty	size	66.8x71.2x12.2
functional name		colour	mid brown-chocolat	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	66.8	max width		retouch	dorsal
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)			blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5385F

simple name	scraper, oval	period	Early Dynastic, 0-II Dynasty	size	92.1x71.7x23.2
functional name		colour	mid brown-chocolat	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	92.1	max width		retouch	dorsal
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)			blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5385G

simple name		period	Early Dynastic, 0-II Dynasty	size	99.8x68.6x13.5
functional name		colour	mid brown-chocolat	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Reused (patina cut through).				

max length	99.8	max width		retouch	dorsal
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)			blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5386A

simple name	knife, OK1	period	Early Dynastic, 0-II Dynasty	size	103.2x48.5x11.4
functional name		colour	orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Tabular flint. Invasive retouch on non cortical side and steep retouch on cortical side.				

max length	103	max width	48.5	retouch	dorsal and ventral
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)	11.4		blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5386B

simple name	knife, OK1	period	Early Dynastic, 0-II Dynasty	size	120.5x43.3x9.8
functional name		colour	orange/brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Steep retouch cortical side.				

max length	121	max width	43.3	retouch	dorsal
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)	9.8		blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5387

simple name		period	Early Dynastic, 0-II Dynasty	size	60.3x27.5x6.3
functional name		colour	light brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	60.3	max width	27.5	retouch	dorsal and ventral
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5390

simple name	bifacial tool	period	Early Dynastic, 0-II Dynasty	size	105.6x29.1x7.7
functional name		colour	light-mid brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description	Flat on one side.				

max length	106	max width	29.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M5392

simple name	scraper, triangular	period	Early Dynastic, 0-II Dynasty	size	55.4x37.7x8.1
functional name		colour	light-mid brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	55.4	max width	37.7	retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38086

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	33.3x11.7x3.9
functional name	sickle	colour	banded brown/grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	33.3	max width	12.1	retouch	Dorsal denticulation along one lateral ed
width(quarter)	11.3	thickness(quarter)	3.8	termination	
width(half)	11.7	thickness(half)	3.7	blade part	
width(3 quarter)	12.1	thickness(3 quarter)	3.9	segmented/truncated	
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38087

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	38.6x11x3.6
functional name	sickle	colour	pink brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	38.6	max width	10.8	retouch	dorsal denticulation one lateral edge. Ba
width(quarter)	11	thickness(quarter)	3.6	termination	
width(half)	10.8	thickness(half)	3.4	blade part	
width(3 quarter)	10.3	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38088

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	46.8x12.7x6.5
functional name	sickle	colour	mid grey/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description	Reworked blade.				

max length	46.8	max width	12.7	retouch	Truncate proximal and distal.
width(quarter)	12.7	thickness(quarter)	4.1	termination	
width(half)	11.6	thickness(half)	5.5	blade part	
width(3 quarter)	12.2	thickness(3 quarter)	6.5	segmented/truncated	
wear	dorsal, along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38089

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	59.2x13.8x4.5
functional name	sickle	colour	mid brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	59.2	max width	13.8	retouch	Dorsal and ventral denticulation one late
width(quarter)	12.4	thickness(quarter)	4.5	termination	
width(half)	13.8	thickness(half)	4.1	blade part	
width(3 quarter)	12.5	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38090

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	39.2x11.7x3.9
functional name	sickle	colour	light brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	39.2	max width	11.7	retouch	ventral retouch one lateral edge and dor
width(quarter)	10	thickness(quarter)	3.3	termination	
width(half)	11.2	thickness(half)	3.9	blade part	
width(3 quarter)	11.7	thickness(3 quarter)	3.9	segmented/truncated	truncated
wear	dorsal, along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38091

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	47.7x10.2x4.3
functional name	sickle	colour	mid brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	47.7	max width	10.2	retouch	dorsal denticulation one lateral edge, ve
width(quarter)	9.6	thickness(quarter)	2.8	termination	
width(half)	9.1	thickness(half)	5	blade part	
width(3 quarter)	10.2	thickness(3 quarter)	4.3	segmented/truncated	truncated
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38092
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	51.2x11.5x3.6
functional name	sickle	colour	mid grey/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	51.2	max width	11.5	retouch	dorsal denticulation one lateral edge, dor
width(quarter)	9.2	thickness(quarter)	3.5	termination	
width(half)	11.5	thickness(half)	3.6	blade part	
width(3 quarter)	11	thickness(3 quarter)	3	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38093
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	55.9x12.8x5.3
functional name	sickle	colour	mid brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	55.9	max width	12.6	retouch	dorsal denticulation one lateral edge, tru
width(quarter)	11.6	thickness(quarter)	4.4	termination	
width(half)	12.8	thickness(half)	5.3	blade part	
width(3 quarter)	12.6	thickness(3 quarter)	5	segmented/truncated	truncated
wear	dorsal and ventral along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38094
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	50.1x12.2x4.5
functional name	sickle	colour	light brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	50.1	max width	12.2	retouch	ventral denticulation and ventral truncati
width(quarter)	11.4	thickness(quarter)	4.5	termination	
width(half)	12.2	thickness(half)	4	blade part	
width(3 quarter)	11.4	thickness(3 quarter)	3.9	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38095
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	48.3x11.9x3.3
functional name	sickle	colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	48.3	max width	11.9	retouch	dorsal and ventral retouch one side back
width(quarter)	11.1	thickness(quarter)	2.8	termination	
width(half)	11.2	thickness(half)	2.9	blade part	
width(3 quarter)	11.9	thickness(3 quarter)	3.3	segmented/truncated	truncated
wear	dorsal and ventral along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38096
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	42.4x10.9x5.1
functional name	sickle	colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	42.4	max width	10.9	retouch	dorsal retouch along one lateral edge, tr
width(quarter)	10.7	thickness(quarter)	4.2	termination	
width(half)	10.9	thickness(half)	5.1	blade part	
width(3 quarter)	10.7	thickness(3 quarter)	4	segmented/truncated	truncated
wear	dorsal, along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38097
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	55x11.2x3.5
functional name	sickle	colour	mid grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	55	max width	11.2	retouch	dorsal and ventral retouch along one late
width(quarter)	11.2	thickness(quarter)	3.2	termination	
width(half)	10.2	thickness(half)	3.2	blade part	
width(3 quarter)	10.1	thickness(3 quarter)	3.5	segmented/truncated	
wear	ventral and dorsal along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38100
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	52x14.4x4.8
functional name	sickle	colour	mid grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	52	max width	14.4	retouch	dorsal backing along one lateral edge, d
width(quarter)	11.6	thickness(quarter)	4.8	termination	
width(half)	13	thickness(half)	4.4	blade part	
width(3 quarter)	14.4	thickness(3 quarter)	4.5	segmented/truncated	
wear	dorsal, along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38098
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	53.1x12.2x3.7
functional name	sickle	colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	53.1	max width	12.2	retouch	dorsal denticulation on one lateral edge,
width(quarter)	12.2	thickness(quarter)	3.2	termination	
width(half)	12	thickness(half)	3.4	blade part	
width(3 quarter)	10.7	thickness(3 quarter)	3.7	segmented/truncated	
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38099
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	58.3x12.5x3.3
functional name	sickle	colour	mid pink/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	58.3	max width	12.5	retouch	dorsal retouch along one lateral edge, tr
width(quarter)	12.5	thickness(quarter)	4.4	termination	
width(half)	9	thickness(half)	3.3	blade part	
width(3 quarter)	11.1	thickness(3 quarter)	3.1	segmented/truncated	truncated
wear	ventral and dorsal along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38101
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	51.5x11.7x4.7
functional name	sickle	colour	mid brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	51.5	max width	11.7	retouch	dorsal retouch along one lateral edge, p
width(quarter)	10.7	thickness(quarter)	4.5	termination	
width(half)	11.7	thickness(half)	4.7	blade part	
width(3 quarter)	10.5	thickness(3 quarter)	4.3	segmented/truncated	
wear	ventral and dorsal along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38102
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	53.5x13.4x3.6
functional name	sickle	colour	mid grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	53.5	max width	13.4	retouch	ventral retouch one edge, truncated prox
width(quarter)	12.6	thickness(quarter)	3.5	termination	
width(half)	13.4	thickness(half)	3.6	blade part	
width(3 quarter)	13.2	thickness(3 quarter)	3.4	segmented/truncated	truncated
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38103
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	46.8x11.7x3.5
functional name	sickle	colour	mid grey/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	46.8	max width	11.7	retouch	dorsal denticulation on one lateral edge,
width(quarter)	10.2	thickness(quarter)	3.1	termination	
width(half)	11.7	thickness(half)	3.4	blade part	
width(3 quarter)	10.5	thickness(3 quarter)	3.5	segmented/truncated	truncated
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38104
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	45.9x11.1x3.8
functional name	sickle	colour	mid grey/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	45.9	max width	11.1	retouch	dorsal denticulation on one lateral edge,
width(quarter)	11.1	thickness(quarter)	3.1	termination	
width(half)	10	thickness(half)	3.8	blade part	
width(3 quarter)	10.6	thickness(3 quarter)	3.5	segmented/truncated	truncated
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38105
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	41.3x15.6x5.8
functional name	sickle	colour	mid grey/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	41.3	max width	15.6	retouch	dorsal denticulation on one lateral edge,
width(quarter)	14.4	thickness(quarter)	5.2	termination	
width(half)	15.6	thickness(half)	5.8	blade part	
width(3 quarter)	14.5	thickness(3 quarter)	5.4	segmented/truncated	truncated
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38106
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	48.2x12.6x3.2
functional name	sickle	colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	48.2	max width	12.6	retouch	dorsal denticulation, truncated proximal
width(quarter)	11.1	thickness(quarter)	3.2	termination	
width(half)	12.6	thickness(half)	3.1	blade part	
width(3 quarter)	11.5	thickness(3 quarter)	3.2	segmented/truncated	truncated
wear	ventral and dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38107
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	41.6x14.8x3.3
functional name	sickle	colour	mid grey/brown	shape	intermediate
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	41.6	max width	14.8	retouch	dorsal denticulation, truncated proximal
width(quarter)	13.1	thickness(quarter)	3.3	termination	
width(half)	14.6	thickness(half)	3	blade part	
width(3 quarter)	14.8	thickness(3 quarter)	2.8	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38108
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	36.3x10.4x3.4
functional name	sickle	colour	mid grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	36.3	max width	10.4	retouch	dorsal denticulation, ventral backing, tru
width(quarter)	10.4	thickness(quarter)	3.2	termination	
width(half)	9.9	thickness(half)	3.4	blade part	
width(3 quarter)	9.1	thickness(3 quarter)	3.4	segmented/truncated	truncated
wear	gloss dorsal and ventral along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38109
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	28.7x14x3.8
functional name	sickle	colour	mid orange brown	shape	intermediate
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	28.7	max width	12.2	retouch	dorsal denticulation, ventral backing, br
width(quarter)	14	thickness(quarter)	3.8	termination	
width(half)	12.2	thickness(half)	3.7	blade part	
width(3 quarter)	11.9	thickness(3 quarter)	3.8	segmented/truncated	seg + trunc
wear	gloss dorsal and ventral along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38110
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	51.7x12.5x4.2
functional name	sickle	colour	mid orange brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	51.7	max width	12.5	retouch	dorsal denticulation, truncated proximal
width(quarter)	12.4	thickness(quarter)	3.7	termination	
width(half)	12.5	thickness(half)	4.2	blade part	
width(3 quarter)	12	thickness(3 quarter)	4.1	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38111
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	35.3x10.7x2.9
functional name	sickle	colour	mid-dark brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	35.3	max width	10.7	retouch	dorsal denticulation, broken one end, tru
width(quarter)	10.7	thickness(quarter)	2.7	termination	
width(half)	10	thickness(half)	2.9	blade part	
width(3 quarter)	10.5	thickness(3 quarter)	2.7	segmented/truncated	seg + trunc
wear	dorsal gloss along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38112
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	29.2x9.2x3.6
functional name	sickle	colour	dark brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	29.2	max width	9.2	retouch	dorsal denticulation, broken one end, tru
width(quarter)	9.2	thickness(quarter)	3.6	termination	
width(half)	9.2	thickness(half)	3.3	blade part	
width(3 quarter)	9.1	thickness(3 quarter)	3.1	segmented/truncated	seg + trunc
wear	gloss dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38113
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	43.2x12.2x2.7
functional name	sickle	colour	mid brown	shape	intermediate
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	43.2	max width	12.2	retouch	dorsal retouch, broken one end, truncate
width(quarter)	12.2	thickness(quarter)	2.5	termination	
width(half)	11.4	thickness(half)	2.7	blade part	
width(3 quarter)	12.2	thickness(3 quarter)	2.7	segmented/truncated	seg + trunc
wear	gloss dorsal and ventral along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38114
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	34.2x11.3x3.9
functional name	sickle	colour	mid brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	34.2	max width	11.3	retouch	dorsal retouch, feathered distal, truncate
width(quarter)	10	thickness(quarter)	2.4	termination	
width(half)	10	thickness(half)	3.6	blade part	
width(3 quarter)	11.3	thickness(3 quarter)	3.9	segmented/truncated	truncated
wear	dorsal gloss along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38115
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	36.3x16x3.5
functional name	sickle	colour	mid brown	shape	broad
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	36.3	max width	15.5	retouch	dorsal retouch, dorsal backing, truncated
width(quarter)	15.4	thickness(quarter)	3.4	termination	
width(half)	16	thickness(half)	3.5	blade part	
width(3 quarter)	15.5	thickness(3 quarter)	3.2	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38116
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	36.5x14.8x4.7
functional name	sickle	colour	mid brown	shape	broad
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	36.5	max width	14.8	retouch	dorsal denticulation, backing, truncated
width(quarter)	14.8	thickness(quarter)	4.7	termination	
width(half)	14	thickness(half)	4.3	blade part	
width(3 quarter)	14.7	thickness(3 quarter)	4.3	segmented/truncated	truncated
wear	dorsal gloss along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38117
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	32.7x10.3x4.2
functional name	sickle	colour	mid brown banded	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	32.7	max width	10.3	retouch	dorsal denticulation, ventral backing, tru
width(quarter)	10.3	thickness(quarter)	3.8	termination	
width(half)	10.1	thickness(half)	4.2	blade part	
width(3 quarter)	9.7	thickness(3 quarter)	3.6	segmented/truncated	seg + trunc
wear	dorsal gloss along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38118
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	39.3x13.5x5.9
functional name	sickle	colour	mid brown-pink	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	39.3	max width	13.5	retouch	dorsal denticulation, cortex on back, trun
width(quarter)	11.9	thickness(quarter)	4.6	termination	
width(half)	12.5	thickness(half)	5.9	blade part	
width(3 quarter)	13.5	thickness(3 quarter)	5.2	segmented/truncated	truncated
wear	gloss dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38119
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	33.9x13.3x3.6
functional name	sickle	colour	cream	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	33.9	max width	13.3	retouch	dorsal denticulation, dorsal backing, trun
width(quarter)	13.3	thickness(quarter)	3.5	termination	
width(half)	13.3	thickness(half)	3.5	blade part	
width(3 quarter)	13.1	thickness(3 quarter)	3.6	segmented/truncated	truncated
wear	dorsal and ventral gloss along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38120
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	46.9x11x3.4
functional name	sickle	colour	cream	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	46.9	max width	10.7	retouch	dorsal denticulation, ventral and cortical
width(quarter)	10.4	thickness(quarter)	3.4	termination	
width(half)	10.7	thickness(half)	3.2	blade part	
width(3 quarter)	11	thickness(3 quarter)	2.2	segmented/truncated	truncated
wear	gloss dorsal along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38121
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	39.5x10.4x4.2
functional name	sickle	colour	light-mid grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	39.5	max width	10.4	retouch	dorsal denticulation, truncated both ends
width(quarter)	10.4	thickness(quarter)	3.5	termination	
width(half)	9.5	thickness(half)	4.2	blade part	
width(3 quarter)	9.4	thickness(3 quarter)	4.2	segmented/truncated	truncated
wear	gloss dorsal and ventral along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38122
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	31.1x10.7x2.3
functional name	sickle	colour	red brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	31.1	max width	10.7	retouch	dorsal denticulation, broken one end, tru
width(quarter)	10.7	thickness(quarter)	2.3	termination	
width(half)	10.1	thickness(half)	2.3	blade part	
width(3 quarter)	10	thickness(3 quarter)	2.5	segmented/truncated	seg + trunc
wear	gloss dorsal and ventral along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38123
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	22.9x11.9x2.6
functional name	sickle	colour	dark brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	22.9	max width	11.9	retouch	ventral denticulation, broken both ends
width(quarter)		thickness(quarter)		termination	
width(half)	11.9	thickness(half)	2.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	segmented
wear	gloss dorsal and ventral along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38124
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	17.3x12.9x2.6
functional name	sickle	colour	mid brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	17.3	max width	12.9	retouch	dorsal denticulation, truncated one end,
width(quarter)		thickness(quarter)		termination	
width(half)	12.9	thickness(half)	2.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	seg + trunc
wear	gloss dorsal and ventral along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38125
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	25x11.5x2.5
functional name	sickle	colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	25	max width	11.5	retouch	dorsal denticulation, backing, truncated
width(quarter)		thickness(quarter)		termination	
width(half)	11.5	thickness(half)	2.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	truncated
wear	dorsal and ventral gloss along denticulated edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38126
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	51.3x12.7x5
functional name	sickle	colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	51.3	max width	12.7	retouch	dorsal retouch, dorsal and ventral backin
width(quarter)	12.4	thickness(quarter)	5	termination	
width(half)	12.7	thickness(half)	4.3	blade part	
width(3 quarter)	11.9	thickness(3 quarter)	4.1	segmented/truncated	truncated
wear	dorsal and ventral gloss along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38127
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	23.1x9.9x2.7
functional name		colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	23.1	max width	9.9	retouch	dorsal and ventral retouch on two lateral
width(quarter)	9.2	thickness(quarter)	2.7	termination	
width(half)	9.9	thickness(half)	2.7	blade part	
width(3 quarter)	9.1	thickness(3 quarter)	2.6	segmented/truncated	seg + trunc
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38128
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	46.9x11.4x4.4
functional name	sickle	colour	light-mid grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	46.9	max width	11.4	retouch	dorsal retouch one edge, ventral retouch
width(quarter)	11.4	thickness(quarter)	3.9	termination	
width(half)	11.1	thickness(half)	4.4	blade part	
width(3 quarter)	10.8	thickness(3 quarter)	4	segmented/truncated	seg + trunc
wear	dorsal and ventral gloss along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38129
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	32.1x11.7x2.9
functional name	sickle	colour	dark grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	32.1	max width	11.7	retouch	ventral retouch along both edges, broke
width(quarter)	11.7	thickness(quarter)	2.9	termination	
width(half)	11.5	thickness(half)	2.7	blade part	
width(3 quarter)	10	thickness(3 quarter)	2.5	segmented/truncated	seg + trunc
wear	dorsal and ventral gloss along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38130
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	41.2x9.8x4.1
functional name		colour	dark grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	41.2	max width	9.1	retouch	ventral retouch along both edges, broke
width(quarter)	9.1	thickness(quarter)	4.4	termination	
width(half)	8.2	thickness(half)	4.1	blade part	
width(3 quarter)	7.6	thickness(3 quarter)	3.4	segmented/truncated	seg + trunc
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38131
simple name	razor	period	Early Dynastic, 0-II Dynasty	size	55.7x18.6x5.2
functional name		colour	mid orange/brown	shape	broad
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	55.7	max width	18.6	retouch	
width(quarter)	16.2	thickness(quarter)	3.9	termination	
width(half)	17.1	thickness(half)	4.9	blade part	
width(3 quarter)	18.6	thickness(3 quarter)	5.2	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38132
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	53.4x14.2x4.6
functional name	sickle	colour	mid orange/brown	shape	intermediate
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	53.4	max width	14.2	retouch	dorsal retouch one edge, truncated both
width(quarter)	12.6	thickness(quarter)	5.6	termination	
width(half)	13.6	thickness(half)	4.6	blade part	
width(3 quarter)	14.2	thickness(3 quarter)	4.6	segmented/truncated	truncated
wear	dorsal gloss along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38133
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	55.3x11.7x4.6
functional name	sickle	colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	55.3	max width	12.2	retouch	ventral retouch one edge, backing, trunc
width(quarter)	11.7	thickness(quarter)	4.4	termination	
width(half)	12.1	thickness(half)	4.4	blade part	
width(3 quarter)	12.2	thickness(3 quarter)	4.6	segmented/truncated	truncated
wear	dorsal and ventral gloss along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38134
simple name	blade, unretouched	period	Early Dynastic, 0-II Dynasty	size	55.9x10.5x4.3
functional name		colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	55.9	max width	10.5	retouch	no retouch, broken both ends
width(quarter)	10.5	thickness(quarter)	4	termination	
width(half)	10.3	thickness(half)	3.9	blade part	
width(3 quarter)	9	thickness(3 quarter)	4.3	segmented/truncated	segmented
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38135
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	39x10.2x2.9
functional name		colour	mid pink/brown	shape	intermediate
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	39	max width	10.2	retouch	ventral retouch one edge, truncated both
width(quarter)	8.2	thickness(quarter)	2.5	termination	
width(half)	10.2	thickness(half)	2.9	blade part	
width(3 quarter)	10	thickness(3 quarter)	2.8	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38136
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	56.3x15.3x4.3
functional name		colour	light brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	56.3	max width	15.3	retouch	truncated both ends
width(quarter)	13.5	thickness(quarter)	3.8	termination	
width(half)	15.3	thickness(half)	4.3	blade part	
width(3 quarter)	15	thickness(3 quarter)	3.9	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38137
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	41.3x11.2x3.7
functional name		colour	cream	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	41.3	max width	11.2	retouch	backing one edge
width(quarter)	11.2	thickness(quarter)	3.7	termination	
width(half)	11.2	thickness(half)	3.3	blade part	
width(3 quarter)	10.7	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38138
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	39x12.8x3.5
functional name	sickle	colour	dark grey	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	39	max width	12.8	retouch	dorsal retouch one edge, ventral other, b
width(quarter)	12.6	thickness(quarter)	3.4	termination	
width(half)	12.8	thickness(half)	3.5	blade part	
width(3 quarter)	12	thickness(3 quarter)	3.1	segmented/truncated	truncated
wear	dorsal gloss along retouched edge				

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38139
simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	73.4x20.5x5.3
functional name	Intermediate	colour	mid orange/brown	shape	broad
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					
max length	73.4	max width	20.5	retouch	dorsal retouch one edge, dorsal and ven
width(quarter)	16	thickness(quarter)	5.3	termination	
width(half)	17.3	thickness(half)	4.5	blade part	
width(3 quarter)	20.5	thickness(3 quarter)	4.1	segmented/truncated	truncated
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38140(5392B)
simple name	scraper, oblong	period	Early Dynastic, 0-II Dynasty	size	62.2x45.6x17.8
functional name		colour	mid orange/brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	62.2	max width	45.6	retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	17.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38141(5392C)
simple name	scraper, oblong	period	Early Dynastic, 0-II Dynasty	size	60.7x47.1x15.6
functional name		colour	orange/brown/pink	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	60.7	max width	47.1	retouch	ventral
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	15.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38142(5392D)
simple name	scraper	period	Early Dynastic, 0-II Dynasty	size	52.5x42.6x8.1
functional name		colour	light pink/brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	52.5	max width	42.6	retouch	dorsal and ventral
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38143(5392E)

simple name	scraper, oval	period	Early Dynastic, 0-II Dynasty	size	45.8x24.6x4.6
functional name		colour	mid orange/brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	Broken.

max length	45.8	max width	24.6	retouch	ventral
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38144(5392F)

simple name	scraper	period	Early Dynastic, 0-II Dynasty	size	69.4x30.9x7.5
functional name		colour	mid pink/brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	Broken, cut through patination.

max length		max width		retouch	dorsal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38145(5390B)

simple name	bifacial point	period	Early Dynastic, 0-II Dynasty	size	69.9x18x9.5
functional name		colour	cream	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	Broken.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38146(5390C)

simple name	bifacial fragment	period	Early Dynastic, 0-II Dynasty	size	50.8x45.8x16.6
functional name		colour	cream	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38147(5390D)

simple name	bifacial point	period	Early Dynastic, 0-II Dynasty	size	55.9x21.4x7.8
functional name		colour	light mid grey	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	Broken.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38148(5390E)

simple name	bifacial knife fragment	period	Early Dynastic, 0-II Dynasty	size	79.1x43.3x7.8
functional name		colour	very dark grey	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38149(5390F)

simple name	flake, unretouched	period	Early Dynastic, 0-II Dynasty	size	80.3x60.6x10.7
functional name		colour	light brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence

references

description

max length	80.3	max width	60.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38150(5390G)

simple name	bifacial knife fragment	period	Early Dynastic, 0-II Dynasty	size	113.7x50.9x8.1
functional name		colour	light-mid brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence

references

description: Broken. V. steep edge retouch. If the curved section is the cutting edge, sharpening was done on the cutting edge and the top edge with the blade pointing away from the retoucher. Seitenbezogenheit.

max length	114	max width	50.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38151(5390H)

simple name	bifacial knife fragment	period	Early Dynastic, 0-II Dynasty	size	125.5x38.4
functional name		colour	light-mid brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence

references

description: V. steep retouch on one edge.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38152(5390I)

simple name	flake, retouched	period	Early Dynastic, 0-II Dynasty	size	82.4x37.8x10.4
functional name		colour		shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description	Tabular flake with cortex. Backed on one edge, retouched other. Broken.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38153(5390J)

simple name	bifacial point	period	Early Dynastic, 0-II Dynasty	size	67.9x21.8x21
functional name		colour	cream	shape	
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description	Broken.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38154(5390K)

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	68x27.7x7.2
functional name		colour	cream	shape	irregular
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description	Denticulated.				

max length	68	max width	27.2	retouch	ventral denticulation, broken both ends
width(quarter)	27.2	thickness(quarter)	7.2	termination	
width(half)	24.1	thickness(half)	6.7	blade part	medial
width(3 quarter)	27.2	thickness(3 quarter)	6.1	segmented/truncated	segmented
wear					

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38155(5390L)

simple name	core, reused	period	Early Dynastic, 0-II Dynasty	size	59.1x57x21
functional name		colour	mid grey	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38156(5390M)

simple name	scraper	period	Early Dynastic, 0-II Dynasty	size	57x23.5x5.1
functional name		colour	light-mid brown	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	Broken.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38157(5390N)

simple name	scraper	period	Early Dynastic, 0-II Dynasty	size	38.9x18x3.7
functional name		colour	mid grey	shape	
excavation no	Temenos, Osiris	house/tomb		context	

date evidence	
references	
description	Broken.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Manchester	MUSEUM NO.	M38158(5390P)

simple name	blade, retouched, lateral	period	Early Dynastic, 0-II Dynasty	size	57.4x12x8
functional name		colour	mid orange/brown	shape	narrow
excavation no	Temenos, Osiris	house/tomb		context	
date evidence					
references					
description					

max length	57.4	max width	12	retouch	dorsal
width(quarter)	10	thickness(quarter)	8	termination	
width(half)	11	thickness(half)	7.1	blade part	medial
width(3 quarter)	12	thickness(3 quarter)	6.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B519.1965

simple name	blade, unretouched	period	Middle Kingdom-New Kingdom	size	58.6x16.9x3.7
functional name		colour	black	shape	irregular
excavation no	H10-4	house/tomb		context	
date evidence					
references	Emery et al. 1976, 118 pl. 102I. Most of the material, according to the report is Middle-New Kingdom				
description	Marked 1962-63 H10-4 (1995).				

max length	58.6	max width	16.9	retouch	
width(quarter)		thickness(quarter)	3.1	termination	
width(half)	16.9	thickness(half)	3.7	blade part	complete
width(3 quarter)	13.3	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B517.1965

simple name	blade, retouched	period	Middle Kingdom-New Kingdom	size	82.5x15.5x4.2
functional name		colour	light-medium brow	shape	narrow
excavation no	H9-18	house/tomb		context	
date evidence					
references	Emery et al. 1976, 118 pl. 102L. Most of the material, according to the report is Middle-New Kingdom				
description	Marked 1962-63 J9-29 (1556).				

max length	82.5	max width	15.5	retouch	dorsal retouch both edges, irregular
width(quarter)	14.3	thickness(quarter)	3.1	termination	
width(half)	15.5	thickness(half)	3.9	blade part	complete
width(3 quarter)	14.6	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B520.1965

simple name	blade, unretouched	period	Middle Kingdom-New Kingdom	size	50.7x11.2x5.2
functional name		colour	light brown	shape	narrow
excavation no	H9-55	house/tomb		context	
date evidence					
references	Emery et al. 1976, 117 pl. 102F. Most of the material, according to the report is Middle-New Kingdom				
description	Marked 1962-63 H9-18 (1382).				

max length	50.7	max width	11.5	retouch	
width(quarter)	11.2	thickness(quarter)	4	termination	
width(half)	9.8	thickness(half)	5.2	blade part	medial
width(3 quarter)	8.8	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B518.1965

simple name	blade, unretouched	period	Middle Kingdom-New Kingdom	size	81.7x20.1x6.8
functional name		colour	mid pink/brown	shape	broad
excavation no	H9-55	house/tomb		context	
date evidence					
references	Emery et al. 1976, 117 pl. 102G. Most of the material, according to the report is Middle-New Kingdom				
description	Marked 1962-63 H9-55 (1420).				

max length	81.7	max width	20.1	retouch	
width(quarter)	17.5	thickness(quarter)	6.1	termination	
width(half)	19.8	thickness(half)	6.8	blade part	complete
width(3 quarter)	20.1	thickness(3 quarter)	6.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B516.1965

simple name	blade, retouched, lateral	period	Middle Kingdom-New Kingdom	size	54.8x14.6x5
functional name	sickle	colour	light brown	shape	broad
excavation no	M10-1	house/tomb		context	
date evidence					
references	Emery et al. 1976, 118 pl. 102N. Most of the material, according to the report is Middle-New Kingdom				
description	Marked 1962-63 M10-1 (1578).				

max length	54.8	max width	14.6	retouch	ventral retouch one edge
width(quarter)	14.6	thickness(quarter)	5	termination	
width(half)	12.9	thickness(half)	4.5	blade part	medial
width(3 quarter)	13.2	thickness(3 quarter)	4.6	segmented/truncated	
wear	ventral and dorsal gloss along retouched edge				

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/1
simple name	blade, retouched, lateral	period	Old Kingdom?	size	53.8x19.3x5.6
functional name	sickle	colour	pinkish brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	In pencil 30/10/63 DG.				

max length	53.8	max width	19.3	retouch	dorsal and ventral retouch, one edge
width(quarter)	19	thickness(quarter)	5.6	termination	
width(half)	13.3	thickness(half)	4.2	blade part	complete
width(3 quarter)	19.3	thickness(3 quarter)	4	segmented/truncated	
wear	dorsal and ventral gloss on retouched edge				

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/2
simple name	blade, unretouched	period	Old Kingdom?	size	64.1x16x2.7
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	64.1	max width	16	retouch	
width(quarter)	16	thickness(quarter)	2.7	termination	
width(half)	14.8	thickness(half)	2.6	blade part	complete
width(3 quarter)	12.2	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/3
simple name	blade, unretouched	period	Old Kingdom?	size	77.1x13.1x4.7
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	77.1	max width	13.1	retouch	
width(quarter)	13.1	thickness(quarter)	3.9	termination	
width(half)	12.4	thickness(half)	4.5	blade part	complete
width(3 quarter)	12.7	thickness(3 quarter)	4.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/4
simple name	blade, unretouched	period	Old Kingdom?	size	82x12.2x6.2
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	82	max width	12.2	retouch	
width(quarter)	12.2	thickness(quarter)	6.2	termination	
width(half)	10.3	thickness(half)	4.7	blade part	proximal
width(3 quarter)	10.3	thickness(3 quarter)	4.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/5
simple name	blade, unretouched	period	Old Kingdom?	size	71.6x12.7x5.1
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	71.6	max width	12.7	retouch	
width(quarter)	12.7	thickness(quarter)	4.7	termination	
width(half)	11.9	thickness(half)	5.1	blade part	complete
width(3 quarter)	11.5	thickness(3 quarter)	4.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/6
simple name	blade, unretouched	period	Old Kingdom?	size	35.8x11.7x6.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	35.8	max width	11.7	retouch	
width(quarter)	10.7	thickness(quarter)	6.8	termination	
width(half)	11.5	thickness(half)	6.8	blade part	distal
width(3 quarter)	11.7	thickness(3 quarter)	5.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/7
simple name	blade, unretouched	period	Old Kingdom?	size	69.5x10.4x7.4
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	69.5	max width	10.4	retouch	
width(quarter)	10.4	thickness(quarter)	2.7	termination	
width(half)	10.4	thickness(half)	2.9	blade part	proximal
width(3 quarter)	7.4	thickness(3 quarter)	2.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/8
simple name	blade, unretouched	period	Old Kingdom?	size	51.1x15.4x3.4
functional name		colour	pinkish brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51.1	max width	15.4	retouch	
width(quarter)	15.4	thickness(quarter)	3.4	termination	
width(half)	13.4	thickness(half)	3.2	blade part	proximal
width(3 quarter)	12.3	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528/1965/9
simple name	blade, unretouched	period	Old Kingdom?	size	60.7x17x5.6
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	60.7	max width	17	retouch	
width(quarter)	14.1	thickness(quarter)	3.8	termination	
width(half)	16.2	thickness(half)	4.6	blade part	complete
width(3 quarter)	17	thickness(3 quarter)	5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/10
simple name	blade, backed	period	Old Kingdom?	size	46.4x11.2x4.9
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	46.4	max width	11.2	retouch	backed left
width(quarter)	10.4	thickness(quarter)	4.4	termination	
width(half)	11.2	thickness(half)	4.9	blade part	distal
width(3 quarter)	7.3	thickness(3 quarter)	4.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/11
simple name	blade, unretouched	period	Old Kingdom?	size	74.5x13.3x3.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	74.5	max width	13.3	retouch	
width(quarter)	13.3	thickness(quarter)	3.8	termination	
width(half)	12.2	thickness(half)	3.5	blade part	proximal
width(3 quarter)	10.6	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/12
simple name	blade, unretouched	period	Old Kingdom?	size	34.5x12.9x4.2
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	34.5	max width	12.9	retouch	
width(quarter)	12.9	thickness(quarter)	4.2	termination	
width(half)	12.9	thickness(half)	3.6	blade part	proximal
width(3 quarter)	12.3	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/13
simple name	blade, unretouched	period	Old Kingdom?	size	52.4x13.1x4.6
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	52.4	max width	13.1	retouch	
width(quarter)	11.8	thickness(quarter)	4.6	termination	
width(half)	12.2	thickness(half)	4.6	blade part	medial
width(3 quarter)	13.1	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/14
simple name	blade, unretouched	period	Old Kingdom?	size	56.4x11.2x4.5
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	56.4	max width	14.2	retouch	
width(quarter)	14.2	thickness(quarter)	4.5	termination	
width(half)	10.7	thickness(half)	3.7	blade part	distal
width(3 quarter)	11.2	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/15
simple name	blade, unretouched	period	Old Kingdom?	size	40.5x9.1x2.6
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	40.5	max width	9.1	retouch	
width(quarter)	9	thickness(quarter)	2.3	termination	
width(half)	9.1	thickness(half)	2.5	blade part	medial
width(3 quarter)	7.5	thickness(3 quarter)	2.6	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/16
simple name	blade, retouched, lateral	period	Old Kingdom?	size	56.2x12x3.6
functional name	sickle	colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	56.2	max width	12	retouch	ventral denticulation along one edge
width(quarter)	11.5	thickness(quarter)	3	termination	
width(half)	12	thickness(half)	3.4	blade part	medial
width(3 quarter)	11	thickness(3 quarter)	3.6	segmented/truncated	
wear	gloss ventral along denticulated edge				

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/17
simple name	blade, unretouched	period	Old Kingdom?	size	21.8x9x3.7
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	21.8	max width	9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)	9	thickness(half)	3.7	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/18
simple name	blade, unretouched	period	Old Kingdom?	size	53.6x11.1x4.3
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	53.6	max width	11.1	retouch	
width(quarter)	10.8	thickness(quarter)	4.3	termination	
width(half)	11.1	thickness(half)	4.1	blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/19
simple name	blade, unretouched	period	Old Kingdom?	size	44x9.2x4.6
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	44	max width	9.2	retouch	
width(quarter)	9.2	thickness(quarter)	4.6	termination	
width(half)	8.9	thickness(half)	4.4	blade part	proximal
width(3 quarter)	8.5	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/20
simple name	blade, unretouched	period	Old Kingdom?	size	52.1x10.5x3.1
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	52.1	max width	10.5	retouch	
width(quarter)	10.2	thickness(quarter)	2.7	termination	
width(half)	10.2	thickness(half)	3.1	blade part	distal
width(3 quarter)	10.5	thickness(3 quarter)	2.7	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/21
simple name	blade, unretouched	period	Old Kingdom?	size	27.1x13.4x2.7
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					
max length	27.1	max width	13.4	retouch	
width(quarter)	13.4	thickness(quarter)		termination	
width(half)		thickness(half)	2.7	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B528.1965/22

simple name	blade, unretouched	period	Old Kingdom?	size	51x14.7x2.8
functional name		colour	light grey brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	51	max width	14.7	retouch			
width(quarter)	14.7	thickness(quarter)	2.8			termination	
width(half)	13.4	thickness(half)	2.4			blade part	proximal
width(3 quarter)	10.4	thickness(3 quarter)	2.3			segmented/truncated	
wear							

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B514.1965

simple name	knife fragment, MK2	period	Middle Kingdom-New Kingdom	size	119.1x35.7x5.9
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Emery et al. 1979, 118 no. 1450, pl. 102.J				
description	Marked 1962-63 M10-8 (1450). Most of the material from this excavation at Buhen is Middle-New Kingdom.				

max length	119	max width	35.7	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.9			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B511.1965

simple name	knife fragment	period	Middle Kingdom-New Kingdom	size	95.2x38.8x7.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Emery et al. 1979, 118 no. 1689, pl. 102.O				
description	Marked DL 6-11-63 Buhen 1963-4 K10-30 1689. Most of the material from this excavation at Buhen is Middle-New Kingdom.				

max length		max width	38.8	retouch	blade sharpened with point away		
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	7.1			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B513.1965

simple name	spear head	period	Middle-Kingdom-New Kingdom	size	74.7x53.9x14.5
functional name		colour	pinkish brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Emery et al. 1979, 118 no. 1523, pl. 102.K				
description	Marked Buhen 1962-63 I9027 (1523). The thickness of this piece is similar to the items cataegorised by Vila 1970 as 'spear' points. Most of the material from this excavation at Buhen is Middle-New Kingdom.				

max length	74.7	max width	53.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	14.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B510.1965

simple name	knife fragment	period	Old Kingdom?	size	91.9x47x7
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked 'Buhen OK town A3-2 294'. Seitenbezogenheit				

max length	91.9	max width	47	retouch	blade sharpened with point away and top
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B512.1965

simple name	knife fragment	period	Old Kingdom?	size	92.7x41.2x5.6
functional name		colour	mottled brown and	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Marked'OK town A4-4 283) Seitenbezogenheit				

max length	92.7	max width	41.2	retouch	blade sharpened with point away and top
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Birmingham	MUSEUM NO.	B515.1965

simple name	scraper	period	Middle Kingdom-New Kingdom	size	98.5x58.4x11.5
functional name		colour	mid orange brown	shape	
excavation no		house/tomb		context	
date evidence					
references	Emery et al. 1979, 118 no. 1557, pl. 102.M				
description	Marked 1962-63 J9-30(1557)				

max length	98.5	max width	58.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	11.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Beni Hasan	MUSEUM	Birmingham	MUSEUM NO.	B3019.1969W

simple name	blade, unretouched	period	?	size	85.1x14.5x3.4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	85.1	max width	14.5	retouch	
width(quarter)	14.5	thickness(quarter)	2.5	termination	
width(half)	12.7	thickness(half)	3.4	blade part	complete
width(3 quarter)	9.5	thickness(3 quarter)	3.4	segmented/truncated	
wear					

PLACE	Tell el Yahudiya	MUSEUM	Birmingham	MUSEUM NO.	B2106. 1885-24

simple name	blade, unretouched	period	?	size	49.2x19.3x5.8
functional name		colour	mid grey	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description	Myers collection.				

max length	49.2	max width	19.3	retouch	
width(quarter)	19.3	thickness(quarter)	5.8	termination	
width(half)	18.9	thickness(half)	5	blade part	complete
width(3 quarter)	17.3	thickness(3 quarter)	4.6	segmented/truncated	
wear					

PLACE	Tell el Yahudiya	MUSEUM	Birmingham	MUSEUM NO.	B2106. 1885-29

simple name	knife fragment	period	?	size	87.4x7.4
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Myers collection.				

max length	87.4	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Liverpool	MUSEUM NO.	L56.20.106

simple name		period	Old Kingdom. 3rd Dynasty	size	116.7x26.3x10.2
functional name		colour	light orange brown	shape	
excavation no		house/tomb	tomb of Rahotep	context	
date evidence					
references	assumed that this flint is from Petrie's excavations since they are part of Spurrell's collection				
description	Part of Spurrell Collection.				

max length	117	max width	26.3	retouch	
width(quarter)	26.3	thickness(quarter)	10.2	termination	
width(half)	23.8	thickness(half)	9.8	blade part	
width(3 quarter)	21.1	thickness(3 quarter)	7	segmented/truncated	
wear	gloss				

PLACE	Meidum	MUSEUM	Liverpool	MUSEUM NO.	L56.20.107

simple name	blade, sickle	period	Old Kingdom, 3rd Dynasty	size	42.9x12.3x2.7
functional name	sickle	colour	light grey	shape	
excavation no		house/tomb		context	
date evidence					
references	assumed that this flint is from Petrie's excavations since they are part of Spurrell's collection				
description	Part of Spurrell Collection.				

max length	42.9	max width	12.3	retouch	denticulated
width(quarter)	11.9	thickness(quarter)	2.7	termination	
width(half)	12.3	thickness(half)	2.5	blade part	medial
width(3 quarter)	11.9	thickness(3 quarter)	2.5	segmented/truncated	
wear	gloss				

PLACE	Meidum	MUSEUM	Liverpool	MUSEUM NO.	L56.20.108

simple name	blade, razor?	period	Old Kingdom, 3rd Dynasty	size	
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Part of Spurrell Collection. marked in pencil Rahotep. 108 and 109 are refitted.				

max length	52.9	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Meidum	MUSEUM	Liverpool	MUSEUM NO.	L56.20.109

simple name	blade	period	Old Kingdom, 3rd Dynasty	size	
functional name		colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description	Part of Spurrell Collection.				

max length	70.2	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Coptos	MUSEUM	Liverpool	MUSEUM NO.	L56.20.110

simple name	knife fragment, OK1	period	Old Kingdom, 3rd Dynasty	size	72.1x36.7x13
functional name		colour	mid grey-brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Part of Spurrell Collection. Made on tabular flint.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Liverpool	MUSEUM NO.	L56.21.770

simple name	blade, retouched, lateral	period	New Kingdom, 18th Dynasty	size	56.9x21.6x4.4
functional name	sickle	colour	mid orange brown	shape	intermediate
excavation no		house/tomb	North Granary	context	North City
date evidence					
references					
description	North Granary NP23/28 1924-5 155.				

max length	56.9	max width	21.6	retouch	dorsal denticulation one side, truncated
width(quarter)	21.6	thickness(quarter)	4	termination	
width(half)	19.5	thickness(half)	4.4	blade part	
width(3 quarter)	17.8	thickness(3 quarter)	3.8	segmented/truncated	truncated
wear	gloss, ventral				

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L1973.2.269B

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	89x17.5x4.9
functional name		colour	mid grey-brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	89	max width	17.5	retouch	
width(quarter)	17	thickness(quarter)	4.5	termination	
width(half)	17.5	thickness(half)	4.9	blade part	complete
width(3 quarter)	14.7	thickness(3 quarter)	4.6	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L1973.2.269C

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	95x21.7x7.8
functional name		colour	mid grey-brown	shape	intermediate
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	95	max width	21.7	retouch	
width(quarter)	21.7	thickness(quarter)	7.8	termination	
width(half)	20.8	thickness(half)	7.5	blade part	complete
width(3 quarter)	18.4	thickness(3 quarter)	7.4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L1973.2.269D

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	76.4x17.6x3.6x3
functional name		colour	mid grey-brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	76.4	max width	17.6	retouch			
width(quarter)	17.6	thickness(quarter)	3.3			termination	
width(half)	17.6	thickness(half)	3.6			blade part	complete
width(3 quarter)	15.1	thickness(3 quarter)	3.2			segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L1973.2.269E

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	86.7x21.3x5.3
functional name		colour	mid grey-brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	86.7	max width	21.3	retouch			
width(quarter)	21.3	thickness(quarter)	4.9			termination	
width(half)	21.3	thickness(half)	5.3			blade part	complete
width(3 quarter)	18.7	thickness(3 quarter)	5.1			segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L1973.2.269F

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	75.8x14.4x5.3
functional name		colour	mid grey-brown	shape	intermediate
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	75.8	max width	14.4	retouch			
width(quarter)	13.2	thickness(quarter)	3.7			termination	
width(half)	14.4	thickness(half)	4.1			blade part	complete
width(3 quarter)	14.2	thickness(3 quarter)	5.3			segmented/truncated	

wear	

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.53
simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	11.8x47.9x7.9
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpened with blade pointing away Seitenbezogenheit.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.51
simple name	knife, MK1	period	Middle Kingdom, 12th Dynasty	size	140x39.8x5.6
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Finely made.				
max length	140	max width	39.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.116
simple name	bifacial thinning fragment	period	Middle Kingdom, 12th Dynasty	size	39.9x31.6x5.5
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.117

simple name	debitage	period	Middle Kingdom, 12th Dynasty	size	41.4x24.4x6.7
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.118

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	38.8x18.9x2.9
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	38.8	max width	18.9	retouch	
width(quarter)	13.6	thickness(quarter)	2.9	termination	
width(half)	18.9	thickness(half)	2.6	blade part	proximal
width(3 quarter)	15	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.119

simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	40.9x10.6x4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	40.9	max width	10.6	retouch	dorsal left
width(quarter)	10.6	thickness(quarter)	3.6	termination	
width(half)	8.9	thickness(half)	3.5	blade part	medial
width(3 quarter)	7.6	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.120
simple name	blade, backed	period	Middle Kingdom, 12th Dynasty	size	20.9x12.9x4.4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	20.9	max width	12.9	retouch	backed
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.4	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.121
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	39x7x3.3
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	39	max width	7	retouch	
width(quarter)	6.1	thickness(quarter)	2.7	termination	
width(half)	7	thickness(half)	3.1	blade part	complete
width(3 quarter)	6.3	thickness(3 quarter)	3.3	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.122
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	24.5x11.6x4.2
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	24.5	max width	11.6	retouch	
width(quarter)	11.4	thickness(quarter)	4.1	termination	
width(half)	11.6	thickness(half)	4.2	blade part	medial
width(3 quarter)	11.1	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.123
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	53.3x14.2x5.5
functional name		colour	mid grey-brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	53.3	max width	14.2	retouch	
width(quarter)	14.2	thickness(quarter)	3.9	termination	
width(half)	12	thickness(half)	5.5	blade part	distal
width(3 quarter)	12	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.124
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	45.7x13x3.7
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	45.7	max width	13	retouch	ventral denticulation left
width(quarter)	13	thickness(quarter)	3.7	termination	
width(half)	10.9	thickness(half)	3.5	blade part	distal
width(3 quarter)	10.4	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.125
simple name	blade, retouched, lateral	period	Middle Kingdom, 12th Dynasty	size	42.8x13.6x3.7
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	42.8	max width	13.6	retouch	dorsal denticulation right and left, distal t
width(quarter)	13.6	thickness(quarter)	3.7	termination	
width(half)	12.2	thickness(half)	3.2	blade part	medial
width(3 quarter)	11.2	thickness(3 quarter)	3	segmented/truncated	seg + trunc
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.126

simple name	blade, sickle	period	Middle Kingdom, 12th Dynasty	size	34.6x11.5x3
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	34.6	max width	10.7	retouch	ventral denticulation ond edge
width(quarter)	10.7	thickness(quarter)	3	termination	
width(half)	10	thickness(half)	2.9	blade part	medial
width(3 quarter)	11.5	thickness(3 quarter)	2.9	segmented/truncated	

wear gloss ventral

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.127

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	36x9.5x4
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	36	max width	9.5	retouch	
width(quarter)	9.5	thickness(quarter)	3.3	termination	
width(half)	9.3	thickness(half)	4	blade part	medial
width(3 quarter)	8.5	thickness(3 quarter)	4	segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.128

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	32.1x10x3.4
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	

date evidence

references

description

max length	32.1	max width	10	retouch	
width(quarter)	8.6	thickness(quarter)	3	termination	
width(half)	9.5	thickness(half)	3.4	blade part	medial
width(3 quarter)	10	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L61.202.132

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	21x12.8x3
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	21	max width	12.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.57

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	140x53.8x7.9
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Finely made.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.56

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	71.7x32.9x7.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Flat on one side.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.55

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	116.4x28.8x7.1
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpened with blade pointing away. Seitenbezogenheit.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.63

simple name	scraper, triangular	period	Middle Kingdom, 12th Dynasty	size	58.4x44.9x9.1
functional name		colour	dark brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.52

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	112.5x31.1x11.1
functional name	broad/intermediate	colour	mid brown	shape	broad
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	113	max width	31.1	retouch	rounded both end
width(quarter)	29.2	thickness(quarter)	11.1	termination	
width(half)	31.1	thickness(half)	9.8	blade part	complete
width(3 quarter)	27.8	thickness(3 quarter)	6.1	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.61

simple name	knife, MK1	period	Middle Kingdom, 12th Dynasty	size	133.7x39.8x8.8
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpened with blade pointing away Positive Seitenbezogenheit.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.64

simple name	end sickle	period	Middle Kingdom, 12th Dynasty	size	57x23.6x6.9
functional name	sickle	colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	57	max width	23.6	retouch	dorsal denticulation. truncation
width(quarter)	16.9	thickness(quarter)	5.8	termination	
width(half)	21.9	thickness(half)	6.9	blade part	
width(3 quarter)	23.6	thickness(3 quarter)	6.5	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.67

simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	101.6x15.4x3.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	102	max width	15.4	retouch	proximal truncation
width(quarter)	15.4	thickness(quarter)	3.3	termination	
width(half)	14.2	thickness(half)	2.6	blade part	distal
width(3 quarter)	12.5	thickness(3 quarter)	3.2	segmented/truncated	truncated
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.68
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	75.9x15.4x4.2
functional name		colour	light grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	75.9	max width	15.4	retouch	proximal truncation
width(quarter)	15.4	thickness(quarter)	4	termination	
width(half)	14.1	thickness(half)	3.9	blade part	distal
width(3 quarter)	13.5	thickness(3 quarter)	4.2	segmented/truncated	truncated
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.69
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	80.6x12.7x2.6
functional name		colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	80.6	max width	12.7	retouch	
width(quarter)	12.7	thickness(quarter)	2	termination	
width(half)	11.7	thickness(half)	2.6	blade part	complete
width(3 quarter)	9.6	thickness(3 quarter)	2.4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.70
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	71.1x11x3.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	71.1	max width	11	retouch	
width(quarter)	10.7	thickness(quarter)	3.8	termination	
width(half)	11	thickness(half)	3.9	blade part	complete
width(3 quarter)	9.3	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.71
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	88.6x15x3.9
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	88.6	max width	15	retouch	
width(quarter)	14.1	thickness(quarter)	3.9	termination	
width(half)	15	thickness(half)	3.8	blade part	complete
width(3 quarter)	14.9	thickness(3 quarter)	3	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.72
simple name	blade, unretouched	period	Middle Kingdom, 12th Dynasty	size	107x14x4
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	107	max width	14	retouch	
width(quarter)	14	thickness(quarter)	2.4	termination	
width(half)	12.5	thickness(half)	3.1	blade part	complete
width(3 quarter)	10.6	thickness(3 quarter)	4	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.62
simple name	knife, MK3 handle	period	Middle Kingdom, 12th Dynasty	size	85.6x40.5x8
functional name		colour	mid orange brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Handled sharped with blade pointing to Positive Seitenbezogenheit.				

max length	85.6	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.60

simple name	knife fragment, MK2	period	Middle Kingdom, 12th Dynasty	size	129.9x41.8x6.9
functional name		colour	light grey brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Sharpened with blade pointing away, flat on one side Seitenbezogenheit.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Liverpool	MUSEUM NO.	L56.20.59

simple name	knife fragment	period	Middle Kingdom, 12th Dynasty	size	133.7x38.7x7.6
functional name		colour	light grey brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1900.42.8

simple name	knife, OK10	period		size	105.7x40.5x7.9
functional name		colour	light-mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	From Petrie's 1898-9 excavations at Abydos.				

max length	106	max width	40.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.108
simple name	razor, square	period	Early Dynastic, II Dynasty	size	60.5x31.2x11
functional name		colour	light-mid brown	shape	broad
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	60.5	max width	31.2	retouch	
width(quarter)	31.2	thickness(quarter)	11	termination	
width(half)	31.2	thickness(half)	11	blade part	
width(3 quarter)	11	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.109
simple name	scraper, triangular	period	Early Dynastic, II Dynasty	size	53.7x41.8x5.1
functional name		colour	Mid ornage brown	shape	
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	53.7	max width	41.8	retouch	dorsal, steep, on three sides
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.111
simple name	knife fragment	period	Early Dynastic, II Dynasty	size	56.5x52.4x9.4
functional name		colour	mid pink/brown	shape	
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	56.5	max width	52.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.73
simple name	blade, hollow scraper	period	Early Dynastic, I Dynasty	size	82.2x37.9x8.7
functional name		colour	mid grey brown	shape	irregular
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	82.2	max width	37.9	retouch	mainly dorsal, some distal
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.110
simple name	scraper, triangular	period	Early Dynastic, II Dynasty	size	58.6x3.1
functional name		colour	mid and dark brow	shape	
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	58.6	max width	56.9	retouch	dorsal, steep, on three sides
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.106
simple name	knife fragment	period	Early Dynastic, II Dynasty	size	150.4x85.9x7.7
functional name		colour	mid orange brown	shape	
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Fine.				

max length	151	max width	85.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.21
simple name	arrowhead, bifacial	period	Early Dynastic, I Dynasty	size	39.5
functional name		colour	crystal	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	39.5	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.27
simple name	grinding pebble	period	Early Dynastic, I Dynasty	size	130.5x46x24.5
functional name		colour	black	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	131	max width	46	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	24.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.19
simple name	razor	period	Early Dynastic, I Dynasty	size	54.4x17.9x2.7
functional name		colour	black	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	54.4	max width	17.9	retouch	
width(quarter)	17.9	thickness(quarter)	2.7	termination	
width(half)	17.9	thickness(half)	2.7	blade part	
width(3 quarter)	2.7	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.26.2
simple name	polished piece	period	Early Dynastic, I Dynasty	size	58.4x18.8x7.6
functional name		colour	grey and black strip	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	58.4	max width	18.8	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.8
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	60.8x14.5x4
functional name		colour	pale brown	shape	narrow
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	60.8	max width	14.5	retouch	proximal, dorsal point, distal end rounde
width(quarter)	13.4	thickness(quarter)	4	termination	
width(half)	14.5	thickness(half)	3.8	blade part	complete
width(3 quarter)	14.3	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.9
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	69.4x10.6x2.6
functional name		colour	pale brown	shape	narrow
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	69.4	max width	10.7	retouch	proximal, dorsal point
width(quarter)	10.6	thickness(quarter)	2.4	termination	
width(half)	10.5	thickness(half)	2.6	blade part	proximal
width(3 quarter)	10.7	thickness(3 quarter)	2.3	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.11
simple name	razor, round	period	Early Dynastic, I Dynasty	size	61.8x32.8x4.5
functional name		colour	pale pinkish brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	61.8	max width	32.8	retouch	
width(quarter)	32.8	thickness(quarter)	4.5	termination	
width(half)	32.8	thickness(half)	4.5	blade part	
width(3 quarter)	32.8	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.14
simple name	razor, round	period	Early Dynastic, I Dynasty	size	65.3x33.8x7.4
functional name		colour	pale pinkish brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	65.3	max width	33.8	retouch	
width(quarter)	33.8	thickness(quarter)	7.4	termination	
width(half)	33.8	thickness(half)	7.4	blade part	
width(3 quarter)	33.8	thickness(3 quarter)	7.4	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.15
simple name	razor, round	period	Early Dynastic, I Dynasty	size	61.6x29.8x7.3
functional name		colour	pale pinkish brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	61.6	max width	29.8	retouch	
width(quarter)	29.8	thickness(quarter)	7.3	termination	
width(half)	29.8	thickness(half)	7.3	blade part	
width(3 quarter)	29.8	thickness(3 quarter)	7.3	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.16
simple name	razor, round	period	Early Dynastic, I Dynasty	size	61.7x27.3x5.6
functional name		colour	pale pinkish brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	61.7	max width	27.3	retouch	
width(quarter)	27	thickness(quarter)	5.6	termination	
width(half)	27.3	thickness(half)	5.6	blade part	
width(3 quarter)	27.3	thickness(3 quarter)	5.6	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.65
simple name	scraper	period	Early Dynastic, I Dynasty	size	40x31.5x8.4
functional name		colour	mid orange brown	shape	
excavation no		house/tomb	tomb of Djet	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	40	max width	31.5	retouch	dorsal, steep, on three sides
width(quarter)	27.3	thickness(quarter)		termination	
width(half)		thickness(half)	8.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.2
simple name	arrowhead, bifacial	period	Early Dynastic, I Dynasty	size	28.5x9.3x3
functional name		colour	mid orange brown	shape	
excavation no		house/tomb	tomb of Mena	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	28.5	max width	9.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.3
simple name	arrowhead, bifacial	period	Early Dynastic, I Dynasty	size	41.3x10x2.8
functional name		colour	light orange brown	shape	
excavation no		house/tomb	tomb of Mena	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	41.3	max width	10	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	2.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.4
simple name	arrowhead, bifacial	period	Early Dynastic, I Dynasty	size	43.9x10.9x3.2
functional name		colour	mid brown	shape	
excavation no		house/tomb	tomb of Mena	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	43.9	max width	10.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.20
simple name	flake	period	Early Dynastic, I Dynasty	size	44.2x27.7x6.8
functional name		colour	cream	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	44.2	max width	27.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.21
simple name	bifacial fragment	period	Early Dynastic, I Dynasty	size	47x21.1x5.3
functional name		colour	light grey	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	47	max width	21.1	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.22
simple name	bifacial fragment	period	Early Dynastic, I Dynasty	size	56.5x3.5x3.6
functional name		colour	light brown	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	56.5	max width	3.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.13
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	33.5x22.8x6
functional name		colour	dark brown pitted fli	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.15
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	57.7x35.1x8.2
functional name		colour	dark brown pitted fli	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	8.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.17
simple name	knife fragment, OK4 or O	period	Early Dynastic, I Dynasty	size	52.5x38x7
functional name		colour	dark brown pitted fli	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Cut out handle.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.18
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	78.4x21.1x6
functional name		colour	light brown	shape	narrow
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	78.4	max width	12.1	retouch	
width(quarter)	10.6	thickness(quarter)	4.4	termination	
width(half)	12.1	thickness(half)	6	blade part	complete
width(3 quarter)	10.8	thickness(3 quarter)	5.1	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.19
simple name	bifacial fragment	period	Early Dynastic, I Dynasty	size	40x20.8x4.8
functional name		colour	dark grey pitted flint	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.16
simple name	razor, fragment	period	Early Dynastic, I Dynasty	size	26.9x29.5x6.2
functional name		colour	mid brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width	29.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.8
simple name	bifacial fragment	period	Early Dynastic, I Dynasty	size	26.4x27.4x4
functional name		colour	mid grey	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.14
simple name	blade, retouched	period	Early Dynastic, I Dynasty	size	35x26.2x4.2
functional name		colour	dark grey	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	35	max width		retouch	steep, distal		
width(quarter)	26.2	thickness(quarter)	4			termination	
width(half)	25.4	thickness(half)	4.2			blade part	distal
width(3 quarter)	24	thickness(3 quarter)	4.1			segmented/truncated	
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.12
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	59.3x18.8x5.7
functional name		colour		shape	irregular
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	59.3	max width	18.8	retouch			
width(quarter)	17.9	thickness(quarter)	5.3			termination	
width(half)	18	thickness(half)	5.7			blade part	medial
width(3 quarter)	18.8	thickness(3 quarter)	4.1			segmented/truncated	
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.11
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	69.8x36.4x5.5
functional name		colour	dark grey pitted flint	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Fine.				

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	5.5			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.10

simple name	knife handle, OK4 or OK	period	Early Dynastic, I Dynasty	size	56.9x37.5x6.2
functional name		colour	dark grey pitted flint	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Seitenbezogenheit.				

max length		max width		retouch	steep retouch underside of handle for rig
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.9

simple name	knife fragment	period	Early Dynastic, I Dynasty	size	47.1x42.7x5.1
functional name		colour	dark grey pitted flint	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Fine.				

max length		max width		retouch	polished one side only
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear	polished one side				

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.7

simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	94.7x18.4x7.7
functional name		colour	cream	shape	narrow
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	94.7	max width	18.4	retouch	
width(quarter)	16.7	thickness(quarter)	6.2	termination	
width(half)	18.4	thickness(half)	7.7	blade part	complete
width(3 quarter)	16.2	thickness(3 quarter)	11	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.6
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	65.9x58.1x7.7
functional name		colour	dark grey pitted flint	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	straight edge on profile
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.5
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	44.8x33.6x5.5
functional name		colour	striped light grey an	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.4
simple name	knife handle, hook, OK4	period	Early Dynastic, I Dynasty	size	34.2x23.1x5.9
functional name		colour	striped pink and gr	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.23.3
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	82x65.3x6.1
functional name		colour	light grey pitted flint	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.24.2
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	105.5x59.1x6.6
functional name		colour	mid pink/brown, pitt	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Fine and straight.				
max length		max width		retouch	straight edge on profile
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1889.27.19
simple name	blade, sickle	period	Middle Kingdom, XII Dynasty	size	75.9x14.6x3.4
functional name	sickle	colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	From Petrie's 1889 excavations.				
max length	75.9	max width	14.6	retouch	ventral denticulation, one edge, broken b
width(quarter)	12.7	thickness(quarter)	3.4	termination	
width(half)	14.6	thickness(half)	3.4	blade part	medial
width(3 quarter)	14.4	thickness(3 quarter)	3.4	segmented/truncated	segmented
wear	dorsal and ventral, same side as denticulation				

PLACE	Kahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1889.27.20

simple name	blade, sickle	period	Middle Kingdom, XII Dynasty	size	71.1x16x4
functional name	sickle	colour	light brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	From Petrie's 1889 excavations.				

max length	71.1	max width	16	retouch	dorsal denticulation left and ventral denti		
width(quarter)	16	thickness(quarter)	4			termination	
width(half)	14.6	thickness(half)	3.9			blade part	distal
width(3 quarter)	12.6	thickness(3 quarter)	3.6			segmented/truncated	
wear	dorsal and ventral, same side as denticulation						

PLACE	El Amrah	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.29.113

simple name	arrowhead, tranchant	period	?Middle Kingdom, ?	size	11.4x10.4x?
functional name		colour	light brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Foreshaft appears to be of hardwood or metal. Orange mastic. Pitt Rivers Museum catalogues this as MK-2IP but El-Amrah published material seems to be Predynastic				

max length	11.4	max width	10.4	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.14

simple name	bifacial point	period	Early Dynastic, I Dynasty	size	44x37.1x14.9
functional name		colour	mid brown	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	44	max width	37.1	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	14.9			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.13
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	55.7x16x6.5
functional name		colour	light-mid brown	shape	irregular
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	55.7	max width	16	retouch	
width(quarter)	16	thickness(quarter)	6.5	termination	
width(half)	15.3	thickness(half)	6.2	blade part	complete
width(3 quarter)	15.2	thickness(3 quarter)	6.1	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.12
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	84.1x19.2x5.1
functional name		colour	light-mid brown	shape	narrow
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	84.1	max width	19.2	retouch	
width(quarter)	17.6	thickness(quarter)	4.9	termination	
width(half)	19.2	thickness(half)	5.1	blade part	complete
width(3 quarter)	16.2	thickness(3 quarter)	4.6	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.11
simple name	bifacial fragment	period	Early Dynastic, I Dynasty	size	52.2x27x6.6
functional name		colour	light-mid brown	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.10
simple name	knife handle, hook, OK4	period	Early Dynastic, I Dynasty	size	61.1x38.4x6.2
functional name		colour	mid-dark grey	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Very fine and straight edge. Positive Seitenbezogenheit.				
max length		max width		retouch	steep retouch underside of handle for rig
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.9
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	48.1.35.2x6.1
functional name		colour	mid-dark grey flint	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.8
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	35.6x38.1x6.9
functional name		colour	mid-dark grey flint	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Very fine and straight edge.				
max length		max width		retouch	straight edge-on profile
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.7
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	49.9x48.5x4.9
functional name		colour	dark grey	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos. Fine.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.6
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	54.5x35.8x7.6
functional name		colour	dark grey striated fli	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.5
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	54.4x35.7x7.6
functional name		colour	dark grey	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	straight edge-on profile
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.4
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	66.4x40.6x6.3
functional name		colour	mid grey	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	straight edge-on profile
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)	6.3		blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.3
simple name	waste flake	period	Early Dynastic, I Dynasty	size	88.1x43.2x12.7
functional name		colour	mid brown	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width	88.1	retouch	
width(quarter)	43.2	thickness(quarter)	12.7		termination
width(half)	42.3	thickness(half)	12.2		blade part
width(3 quarter)	40.5	thickness(3 quarter)	12.3		segmented/truncated
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.2
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	72.5x53.1x8.4
functional name		colour	dark grey	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length		max width		retouch	straight edge-on profile
width(quarter)		thickness(quarter)			termination
width(half)		thickness(half)	8.4		blade part
width(3 quarter)		thickness(3 quarter)			segmented/truncated
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.70.1
simple name	core	period	Early Dynastic, I Dynasty	size	42x43.3x16.2
functional name		colour	mid pinkish brown	shape	
excavation no		house/tomb	tomb of Den	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1900.42.9
simple name	arrowhead, bifacial	period	New Kingdom, 18th Dynasty	size	c.28.4
functional name		colour	cream	shape	
excavation no		house/tomb	tomb D29.D	context	
date evidence					
references	Randall-MacIver and Mace 1902, 89 pl. XLVIII.				
description	From Petrie's 1898-9 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1900.42.10
simple name	arrowhead	period	New Kingdom, 18th Dynasty	size	c.28.4
functional name		colour	cream	shape	
excavation no		house/tomb	tomb D29.D	context	
date evidence					
references	Randall MacIver and Mace 1902, 89 pl. XLVIII.				
description	From Petrie's 1898-9 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.104
simple name	blade, unretouched	period	Early Dynastic, II Dynasty	size	43.8x17.8x7.6
functional name		colour	mid pinkish brown	shape	irregular
excavation no		house/tomb	tomb of Peribsen	context	

date evidence

references

description: From Petrie's 1900-01 excavations at Abydos. Hinge fracture.

max length	43.8	max width	17.8	retouch	
width(quarter)	17.8	thickness(quarter)	7.6	termination	
width(half)	17.4	thickness(half)	6.2	blade part	proximal
width(3 quarter)	15.4	thickness(3 quarter)	6.6	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.103
simple name	blade, retouched, scrape	period	Early Dynastic, II Dynasty	size	73.1x41.6x12.9
functional name		colour	mottled pink brown	shape	
excavation no		house/tomb	tomb of Peribsen	context	

date evidence

references

description: From Petrie's 1900-01 excavations at Abydos.

max length	73.1	max width	41.6	retouch	dorsal right, steep. Ventral right shallow,
width(quarter)	41.6	thickness(quarter)	12.9	termination	
width(half)	39.1	thickness(half)	10.7	blade part	complete
width(3 quarter)	38.7	thickness(3 quarter)	11.2	segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.102
simple name	waste flake	period	Early Dynastic, II Dynasty	size	69x42.4x11.3
functional name		colour	light-mid brown	shape	
excavation no		house/tomb	tomb of Peribsen	context	

date evidence

references

description: From Petrie's 1900-01 excavations at Abydos.

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.101
simple name	waste flake	period	Early Dynastic, II Dynasty	size	118.4x40.7x11.9
functional name		colour	mid brown	shape	
excavation no		house/tomb	tomb of Peribsen	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	complete
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.29
simple name	bracelet fragment	period	Early Dynastic, I Dynasty	size	
functional name		colour	light grey	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.30
simple name	bracelet fragment	period	Early Dynastic, I Dynasty	size	
functional name		colour	mid orange	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.31
simple name	bracelet fragment	period	Early Dynastic, I Dynasty	size	
functional name		colour	cream	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.32
simple name	bracelet fragment	period	Early Dynastic, I Dynasty	size	
functional name		colour	mid pink	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.33
simple name	bracelet fragment	period	Early Dynastic, I Dynasty	size	
functional name		colour	brown	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				
max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Lahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1889.27.23

simple name	knife, MK1	period	Middle Kingdom, XII Dynasty	size	180x54x6.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Petrie coll d 1889. Finely made.				

max length	180	max width	54	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.5.1

simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	69x14.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	tomb of Mena	context	
date evidence					
references	Petrie 1901, 21, pl.XXXVI				
description	From Petrie's 1900-01 excavations at Abydos. Inscribed with name of Aha.				

max length	69	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	14.2	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.5.2

simple name	bone 'blade'	period	Early Dynastic, I Dynasty	size	46x12.4
functional name		colour	bone	shape	
excavation no		house/tomb	tomb of Mena	context	
date evidence					
references	Petrie 1901, 21, pl.XXXVI				
description	From Petrie's 1900-01 excavations at Abydos. Inscribed with name of Aha.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1889.27.22
simple name	knife, MK2	period	Middle Kingdom, XII Dynasty	size	142x40.5x7.3
functional name		colour	mottled mid and da	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	dd Petrie 1889.				

max length	142	max width	40.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1889.27.24
simple name	knife, MK1	period	Middle Kingdom, XII Dynasty	size	129.6x68.4x9.6
functional name		colour	mid brown	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	dd Petrie 1889.				

max length	130	max width	68.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Thebes	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1896.53.2.1-2
simple name	knife, NK	period	New Kingdom, 19th Dynasty	size	126.3x37.4x6.9
functional name		colour	mid-dark grey/brow	shape	
excavation no		house/tomb	Ramesseum	context	
date evidence	In 1896 Quibell excavated for the Egyptian Research account in the process of which he cleared Middle Kingdom as well as 19th Dynasty material, this artefact was deposited as part of that. It is not published in Quibell 1898, 'The Ramesseum'. Quibell 1898				
references					
description	knife is flatter on one side than the other. Very similar to Middle Kingdom MK1 types.				

max length	126	max width	37.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1889.27.18

simple name	blade, pointed	period	Middle Kingdom, XII Dynasty	size	96.2x15.9x5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	96.2	max width	15.9	retouch	backed dorsal seft toward distal end
width(quarter)	15.9	thickness(quarter)	3.7	termination	
width(half)	13.3	thickness(half)	4.3	blade part	complete
width(3 quarter)	12.4	thickness(3 quarter)	5	segmented/truncated	
wear					

PLACE	Kahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1889.27.17

simple name	blade, unretouched	period	Middle Kingdom, XII Dynasty	size	93.8x16.1x5.3
functional name		colour	mid-dark brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	93.8	max width	16.1	retouch	
width(quarter)	15.5	thickness(quarter)	4.2	termination	
width(half)	16.1	thickness(half)	5.3	blade part	complete
width(3 quarter)	12.7	thickness(3 quarter)	4.2	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.26.1

simple name	polished piece	period	Early Dynastic, I Dynasty	size	30.2x14.6x3.5
functional name		colour	light-mid brown	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	30.2	max width	14.6	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.20
simple name	blade, retouched, lateral	period	Early Dynastic, I Dynasty	size	46.8x14.1x4
functional name		colour	dark brown	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	From Petrie's 1900-01 excavations at Abydos.				

max length	46.8	max width	14.1	retouch	dorsal denticulation of both edges. Ventr		
width(quarter)	13.4	thickness(quarter)	3.3			termination	
width(half)	14.1	thickness(half)	4			blade part	medial
width(3 quarter)	13.8	thickness(3 quarter)	3.6			segmented/truncated	seg + trunc
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.12
simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	59.3x28.1x3
functional name		colour	mid brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	Thinned at proximal end.				

max length	59.3	max width	28.1	retouch			
width(quarter)	28.1	thickness(quarter)	3			termination	
width(half)	28.1	thickness(half)	3			blade part	
width(3 quarter)	28.1	thickness(3 quarter)	3			segmented/truncated	
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.6
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	76x14.2x3.2
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	76	max width	14.2	retouch	sharpened to a point at proximal end. Di		
width(quarter)	14.1	thickness(quarter)	2.5			termination	
width(half)	14.2	thickness(half)	2.7			blade part	
width(3 quarter)	10.2	thickness(3 quarter)	3.2			segmented/truncated	
wear							

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.10
simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	58x20.7x4.4
functional name		colour	mid brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	58	max width	20.7	retouch	
width(quarter)	20.7	thickness(quarter)	4.4	termination	
width(half)	20.7	thickness(half)	4.4	blade part	
width(3 quarter)	20.7	thickness(3 quarter)	4.4	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2124
simple name		period	Early Dynastic, II Dynasty	size	
functional name		colour		shape	
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2125.1
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	81.5x12x3.8
functional name		colour	pale pink/brown	shape	narrow
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	81.5	max width	12	retouch	
width(quarter)	12	thickness(quarter)	3.2	termination	
width(half)	11.9	thickness(half)	3.1	blade part	complete
width(3 quarter)	9.5	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2125.2

simple name	blade, retouched, lateral	period	Early Dynastic, I Dynasty	size	58.8x16x3.8
functional name		colour	pale pink/brown	shape	narrow
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	58.8	max width	16	retouch	
width(quarter)	14.4	thickness(quarter)	3.8	termination	
width(half)	14.7	thickness(half)	3.5	blade part	proximal
width(3 quarter)	16	thickness(3 quarter)	3.7	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2125.3

simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	69.7x12.5x2.7
functional name		colour	pale pink/brown	shape	narrow
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	69.7	max width	12.5	retouch	
width(quarter)	12.5	thickness(quarter)	2.7	termination	
width(half)	10	thickness(half)	2.1	blade part	complete
width(3 quarter)	8.2	thickness(3 quarter)	2.2	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2125.4

simple name	knife handle, hook. OK4	period	Early Dynastic, I Dynasty	size	37.6x25.5x5
functional name		colour		shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2125.5
simple name	knife handle, hook, OK4	period	Early Dynastic, I Dynasty	size	30.8x21.9x4.4
functional name		colour		shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2126.1
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	52x23.6x7.7
functional name		colour	very dark brown	shape	intermediate
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length	52	max width	23.6	retouch	
width(quarter)	23.6	thickness(quarter)	7.7	termination	
width(half)	23.1	thickness(half)	7.4	blade part	distal
width(3 quarter)	17.4	thickness(3 quarter)	5.9	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2126.2
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	79.8x16.1x6.4
functional name		colour	cream	shape	narrow
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length	79.8	max width	16.1	retouch	
width(quarter)	16.1	thickness(quarter)	5.1	termination	
width(half)	15.6	thickness(half)	6.4	blade part	complete
width(3 quarter)	15.4	thickness(3 quarter)	6.2	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2126.3
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	66.3x14.5x4.3
functional name		colour	mid pink brown	shape	narrow
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length	66.3	max width	14.5	retouch	
width(quarter)	13.9	thickness(quarter)	4.2	termination	
width(half)	14.5	thickness(half)	4.3	blade part	complete
width(3 quarter)	12.8	thickness(3 quarter)	3.8	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2126.4
simple name	scraper	period	Early Dynastic, I Dynasty	size	
functional name		colour	mid brown	shape	
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2126.5
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	50.5x30.2x8.5
functional name		colour	mid brown	shape	
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2126.6

simple name	knife handle, hook., OK4	period	Early Dynastic, I Dynasty	size	45.2x16.2x4.5
functional name		colour	dark grey	shape	
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H2126.7

simple name	knife handle, OK6 or OK	period	Early Dynastic, I Dynasty	size	45.6x48.9x5.9
functional name		colour	dark grey pitted flint	shape	
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.9	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H3872

simple name	scraper, triangular	period	Early Dynastic, II Dynasty	size	56.9x56x6.3
functional name		colour	mid pink/brown	shape	
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description					

max length	56.9	max width	59	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H3874
simple name	razor, round	period	Early Dynastic, I Dynasty	size	54.9x20.1x4.5
functional name		colour	mid brown	shape	broad
excavation no		house/tomb	tomb of Den (mast	context	
date evidence					
references					
description					

max length	54.9	max width	20.1	retouch	
width(quarter)	19.4	thickness(quarter)	3.6	termination	
width(half)	20.1	thickness(half)	3.8	blade part	
width(3 quarter)	18.5	thickness(3 quarter)	4.5	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Bristol	MUSEUM NO.	H466
simple name	arrowhead, bifacial	period	Early Dynastic, I Dynasty	size	33.6x.9x2.5
functional name		colour	orange brown	shape	
excavation no		house/tomb	tomb of Aha	context	
date evidence					
references					
description					

max length	33.6	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.23.3
simple name	knife, fragment	period	Early Dynastic, I Dynasty	size	85x38.2x6
functional name		colour	light-mid brown	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description	Polished one side and ripple flaked other				

max length	85	max width	38.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Amarna	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1922.30.4

simple name	blade	period	New Kingdom, 18th Dynasty	size	84.2x22.6x7
functional name		colour	light brown	shape	irregular
excavation no		house/tomb	Main City	context	

date evidence	
references	Peet and Woolley 1923, 28 22/518.
description	

max length	84.2	max width	22.6	retouch	dorsal		
width(quarter)	19	thickness(quarter)	5.5			termination	
width(half)	22.6	thickness(half)	6.6			blade part	complete
width(3 quarter)	20.8	thickness(3 quarter)	7			segmented/truncated	

wear	

PLACE	Amarna	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1922.30.3

simple name	blade, sickle	period	New Kingdom, 18th Dynasty	size	84.3x19.4x8.1
functional name	sickle	colour	dark grey	shape	
excavation no		house/tomb	River Temple	context	

date evidence	
references	
description	22/424 .

max length	84.3	max width	19.4	retouch			
width(quarter)	16.5	thickness(quarter)	6			termination	
width(half)	18.2	thickness(half)	7.7			blade part	
width(3 quarter)	19.4	thickness(3 quarter)	8.1			segmented/truncated	truncated

wear	along right denticulation

PLACE	Kahun	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1918.42.28

simple name	sickle, end	period	Middle Kingdom, XII Dynasty	size	60.3x22.2x6.2
functional name	sickle	colour	mid brown	shape	
excavation no		house/tomb		context	

date evidence	
references	
description	

max length	60.3	max width	22.2	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	6.2			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	dorsal and vental along denticulated edge

PLACE	Amarna	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1922.30.2

simple name	sickle, end	period	New Kingdom, 18th Dynasty	size	82.8x28.4x6.7
functional name	sickle	colour	light brown	shape	
excavation no		house/tomb	River Temple	context	
date evidence					
references					
description	22/423				

max length	82.8	max width	28.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear	one one side of denticulations				

PLACE	Abydos, OK	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1909.26.5

simple name	knife	period	Early Dynastic, II Dynasty	size	390x69.5x10.4
functional name		colour	mid orange br and	shape	
excavation no		house/tomb		context	
date evidence					
references					
description	Irregular edge on profile. From Garstangs excavations of a 2nd Dynasty Palace. Roughly flaked.				

max length	390	max width	69.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	10.4	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.107

simple name	knife, fragment	period	Early Dynastic, II Dynasty	size	170x41.5x6.3
functional name		colour	mid orange brown	shape	
excavation no		house/tomb	tomb of Khasekhe	context	
date evidence					
references					
description					

max length	170	max width	41.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.71

simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	74.8x27.6x6.8
functional name		colour	mid and light brown	shape	broad
excavation no		house/tomb	tomb of Den (mast	context	

date evidence	
references	
description	

max length	74.8	max width	27.6	retouch	
width(quarter)	25.9	thickness(quarter)	6.8	termination	
width(half)	27.1	thickness(half)	6.5	blade part	
width(3 quarter)	27.6	thickness(3 quarter)	5.3	segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.25

simple name	polished piece	period	Early Dynastic, I Dynasty	size	94.5x20.8x3.1
functional name		colour	mid brown pitted fli	shape	
excavation no		house/tomb	tomb of Djer	context	

date evidence	
references	
description	Polished all round, perhaps a knife handle?

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.22

simple name	arrowhead?	period	Early Dynastic, I Dynasty	size	20.7x10.5x3.5
functional name		colour	dark brown	shape	
excavation no		house/tomb	tomb of Djer	context	

date evidence	
references	
description	The museum catalogue suggests it may be a tattooing instrument (See Petrie 1901, 24 for reference to another tattooing instrument).

max length	20.7	max width	10.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear	

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.17
simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	62.5x26.3x6
functional name		colour	light-mid brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	62.5	max width	26.3	retouch	
width(quarter)	25.5	thickness(quarter)	6	termination	
width(half)	26.3	thickness(half)	4.9	blade part	
width(3 quarter)	26	thickness(3 quarter)	4.1	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.13
simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	60.1x27.1x4.9
functional name		colour	light-mid brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	60.1	max width	27.1	retouch	
width(quarter)	27.1	thickness(quarter)	4.9	termination	
width(half)	26.9	thickness(half)	4.2	blade part	
width(3 quarter)	26	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.7
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	
functional name		colour	mid brown and light	shape	
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	82.4	max width	17.7	retouch	dorsal
width(quarter)	11.9	thickness(quarter)		termination	
width(half)	12.5	thickness(half)	12.3	blade part	
width(3 quarter)		thickness(3 quarter)	12.5	segmented/truncated	
wear					

PLACE	Abydos	MUSEUM	Pitt Rivers	MUSEUM NO.	PR1901.40.10
simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	57.7x22.5x4.9
functional name		colour	light-mid brown	shape	broad
excavation no		house/tomb	tomb of Djer	context	
date evidence					
references					
description					

max length	57.7	max width	22.5	retouch			
width(quarter)	22.5	thickness(quarter)	4.9			termination	
width(half)	20.6	thickness(half)	4.4			blade part	
width(3 quarter)	21	thickness(3 quarter)	3.6			segmented/truncated	
wear							

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5143
simple name	core, disc	period	Early Dynastic, I Dynasty	size	54.6x50.3x7.6
functional name		colour	mid brown	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references					
description					

max length		max width		retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)				blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5142
simple name	axe?	period	Early Dynastic, I Dynasty	size	68.1x48.7x23
functional name		colour	creamy reddish bro	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references	marked'MH' de Morgan p202 fig 776, 777				
description					

max length	68.1	max width	48.7	retouch			
width(quarter)		thickness(quarter)				termination	
width(half)		thickness(half)	23			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5129
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	75.7x14.9x3.4
functional name		colour	grey	shape	narrow
excavation no		house/tomb	royal tomb, 402	context	
date evidence					
references	Morgan p201 figs 771, 773				
description					

max length	75.7	max width	14.6	retouch	dorsal
width(quarter)	11.5	thickness(quarter)	3.3	termination	
width(half)	14.6	thickness(half)	3.4	blade part	
width(3 quarter)	14.3	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5121
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	63.6
functional name		colour	mid brown	shape	
excavation no		house/tomb	royal tomb, 392	context	
date evidence					
references					
description					

max length	63.7	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5122
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	56.7
functional name		colour	mid brown	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references					
description					

max length	56.7	max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5118
simple name	bifacial knife, OK3	period	Early Dynastic, I Dynasty	size	180x30.4x9.8
functional name		colour	mid brown	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references					
description					

max length	180	max width	30.4	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5119
simple name	blade, retouched, lateral	period	Early Dynastic, I Dynasty	size	76.9x25.7x9.8
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	royal tomb	context	
date evidence					
references					
description					

max length	76.9	max width	25.7	retouch	dorsal, both lateral edges
width(quarter)	22.7	thickness(quarter)	9.4	termination	
width(half)	23.7	thickness(half)	9.8	blade part	medial
width(3 quarter)	25.7	thickness(3 quarter)	8.5	segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5133
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	44.8x14.5x2.5
functional name		colour	grey	shape	narrow
excavation no		house/tomb		context	
date evidence					
references	de Morgan 201, fig 771, 773, 774				
description					

max length	44.8	max width	14.5	retouch	dorsal
width(quarter)	13.6	thickness(quarter)	2.5	termination	
width(half)	14.5	thickness(half)	2.4	blade part	proximal
width(3 quarter)	13.4	thickness(3 quarter)	2.5	segmented/truncated	
wear	pointed ventral end glossy				

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5134
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	39.9x12.2x3.1
functional name		colour	grey, partly redden	shape	narrow
excavation no		house/tomb	royal tomb, 390	context	
date evidence					
references					
description					

max length	39.9	max width	12.2	retouch	
width(quarter)	12.2	thickness(quarter)	2.3	termination	
width(half)	11.6	thickness(half)	2.9	blade part	proximal
width(3 quarter)	11.2	thickness(3 quarter)	3.1	segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5135
simple name	blade, unretouched	period	Early Dynastic, I Dynasty	size	33.2x11.2x3.2
functional name		colour	grey	shape	narrow
excavation no		house/tomb	royal tomb, 406	context	
date evidence					
references					
description	Marked '406'.				

max length	33.2	max width	11.2	retouch	
width(quarter)	11.2	thickness(quarter)	3.2	termination	
width(half)	8.4	thickness(half)	2	blade part	
width(3 quarter)	6.2	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5136
simple name	razor fragment	period	Early Dynastic, I Dynasty	size	26.4x7.5x3.2
functional name		colour	grey	shape	broad
excavation no		house/tomb	royal tomb 398	context	
date evidence					
references	de Morgan 201, fig, 773, 772 a and b				
description	Bulb of percussion removed. Marked '398'.				

max length	26.4	max width	17.7	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	3.2	blade part	proximal
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5130
simple name	blade, retouched, lateral	period	Early Dynastic, I Dynasty	size	60x12.6x4.5
functional name		colour	dark grey	shape	narrow
excavation no		house/tomb	royal tomb	context	
date evidence					
references					
description					

max length	60	max width	12.6	retouch	dorsal right lateral edge also distal dorsa
width(quarter)	12.6	thickness(quarter)	4.5	termination	B514.1965
width(half)	11.1	thickness(half)	3.5	blade part	distal
width(3 quarter)	8.1	thickness(3 quarter)	3.1	segmented/truncated	segmented
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5131
simple name	blade, pointed	period	Early Dynastic, I Dynasty	size	53.2x11.7x4.3
functional name		colour	very dark grey	shape	narrow
excavation no		house/tomb	royal tomb 405	context	
date evidence					
references					
description					

max length	53.2	max width	11.7	retouch	proximal, dorsal
width(quarter)	11.7	thickness(quarter)	4.3	termination	
width(half)	11.2	thickness(half)	4	blade part	proximal
width(3 quarter)	9.7	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5123
simple name	blade, retouched, lateral	period	Early Dynastic, I Dynasty	size	52.4x18x5.3
functional name		colour	mid brown/grey	shape	intermediate
excavation no		house/tomb	royal tomb 403	context	
date evidence					
references					
description					

max length	52.4	max width	18	retouch	
width(quarter)	17.2	thickness(quarter)	5.3	termination	
width(half)	17.7	thickness(half)	5.2	blade part	
width(3 quarter)	18	thickness(3 quarter)	6.1	segmented/truncated	
wear	dorsal, both lateral edges				

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5137
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	94.3x52.3x5.8
functional name		colour	grey and black pitte	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references	de Morgan fig 769				
description	Pencilled 'E'.				

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5138
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	56.2x62.4x4.7
functional name		colour	grey, slightly pitted	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references	de Morgan p200 fig 769				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5139
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	47.6x43.8x5
functional name		colour	black and burnt	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references	de Morgan p200 fig 769				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5140
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	59.8x50x6.8
functional name		colour	light grey and pitted	shape	
excavation no		house/tomb	royal tomb 389	context	
date evidence					
references					
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.8	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Naqada	MUSEUM	Liverpool Universi	MUSEUM NO.	E5141
simple name	knife fragment	period	Early Dynastic, I Dynasty	size	54.9x43.9x7.3
functional name		colour	pitted and reddene	shape	
excavation no		house/tomb	royal tomb	context	
date evidence					
references	de Morgan 200 fig 769				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	7.3	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.105
simple name	spear head	period	Middle Kingdom-New Kingdom	size	115x55x12
functional name		colour	mid pinky brown	shape	
excavation no	I8-23	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 1136, pl.102.E. According to Emery, this item comes from Block B, sector C. Emery et al. (1979, 55) suggests that this is a Middle Kingdom-New Kingdom workshop and domestic area.				
description					

max length	112	max width		retouch	
width(quarter)	52	thickness(quarter)	15.4	termination	
width(half)	45.5	thickness(half)	14.6	blade part	
width(3 quarter)	39.6	thickness(3 quarter)	13.6	segmented/truncated	
wear	possible traces of mastic at hafted end				

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.106
simple name	knife fragment, MK2	period	Middle Kingdom-New Kingdom	size	130x20x6
functional name		colour	cream flint	shape	
excavation no	J7-141	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 116 no. 462, pl.102.H				
description	Flatter on one side than other. Negative 'Seitenbezogenheit'.				

max length	132	max width	26.2	retouch	
width(quarter)		thickness(quarter)	6.4	termination	
width(half)		thickness(half)	6.7	blade part	
width(3 quarter)		thickness(3 quarter)	6.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.128
simple name	blade, debitage	period	Middle Kingdom-New Kingdom	size	75x26x6
functional name		colour	dark brown	shape	
excavation no	K11-1	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 929				
description					

max length	73.9	max width		retouch	
width(quarter)	18.6	thickness(quarter)	7.6	termination	hinged
width(half)	20.6	thickness(half)	8.4	blade part	proximal
width(3 quarter)	18.6	thickness(3 quarter)	10.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.107
simple name	blade	period	Middle Kingdom-New Kingdom	size	67x23x9
functional name		colour	cream	shape	
excavation no	N11-2	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 960				
description	Prominent bulb of percussion.				

max length	64.5	max width		retouch	
width(quarter)	21.9	thickness(quarter)	6.5	termination	
width(half)	20.5	thickness(half)	5.1	blade part	complete
width(3 quarter)	16.4	thickness(3 quarter)	3.9	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.119

simple name	debitage, blade	period	Middle Kingdom-New Kingdom	size	65x23x4
functional name		colour	dark brown	shape	
excavation no	H7-66	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 762

description

max length	64.2	max width		retouch	
width(quarter)	23.2	thickness(quarter)	4.8	termination	
width(half)	19.8	thickness(half)	4.5	blade part	complete
width(3 quarter)	10.7	thickness(3 quarter)	3.6	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.120

simple name	blade	period	Middle Kingdom-New Kingdom	size	60x14x4
functional name		colour	mid grey/brown	shape	
excavation no	K9-35	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 904

description

max length	57.4	max width		retouch	
width(quarter)	12.3	thickness(quarter)	2.8	termination	
width(half)	13.5	thickness(half)	3.2	blade part	distal
width(3 quarter)	13.6	thickness(3 quarter)	3.3	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.133

simple name	blade, crested	period	Middle Kingdom-New Kingdom	size	53x10x2
functional name		colour	light-mid brown	shape	
excavation no	K11-7	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 935

description

max length	51.1	max width		retouch	
width(quarter)	10.9	thickness(quarter)	4.3	termination	
width(half)	9	thickness(half)	4.5	blade part	
width(3 quarter)	6.1	thickness(3 quarter)	3.7	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.126
simple name	blade, debitage	period	Middle Kingdom-New Kingdom	size	50x14x3
functional name		colour	light-mid brown	shape	
excavation no	K8-76	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 955				
description					

max length	67.6	max width		retouch	
width(quarter)	13	thickness(quarter)		termination	
width(half)	10.8	thickness(half)		blade part	complete
width(3 quarter)	12.1	thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.129
simple name	blade, debitage	period	Middle Kingdom-New Kingdom	size	47x21x7
functional name		colour		shape	
excavation no	H7-70	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 766				
description					

max length	44.1	max width		retouch	
width(quarter)	19.3	thickness(quarter)	8	termination	
width(half)	21.6	thickness(half)	6.1	blade part	proximal
width(3 quarter)	20.4	thickness(3 quarter)	6.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.118
simple name	blade	period	Middle Kingdom-New Kingdom	size	48x19x4
functional name		colour	light brown	shape	
excavation no	H7-86	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 785				
description					

max length	43	max width		retouch	
width(quarter)	18.7	thickness(quarter)	5.8	termination	
width(half)	16.8	thickness(half)	4.8	blade part	proximal
width(3 quarter)	16.6	thickness(3 quarter)	4.3	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.122

simple name	scraper/borer	period	New Kingdom	size	60x57x3
functional name		colour	mid brown	shape	
excavation no	I7-139	house/tomb		context	

date evidence	
references	Emery, et al., 1979, 117 no. 618
description	Some retouch around edge-wear striations.

max length	58.8	max width		retouch			
width(quarter)	41	thickness(quarter)	6.9			termination	
width(half)	41.7	thickness(half)	6.9			blade part	
width(3 quarter)	37.6	thickness(3 quarter)	5.8			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.117

simple name	blade	period	New Kingdom	size	91x16x3
functional name		colour	light-mid brown	shape	
excavation no	I7-138	house/tomb		context	

date evidence	
references	Emery, et al., 1979, 117 no. 617
description	Found in Block C, House F. According to Emery et al. p63 this had mainly NK pottery.

max length	94.9	max width		retouch	dorsal and ventral irregular		
width(quarter)	17.4	thickness(quarter)	3.7			termination	
width(half)	15.6	thickness(half)	3.9			blade part	complete
width(3 quarter)	13.1	thickness(3 quarter)	4.8			segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.124

simple name	knife tip	period	Middle Kingdom-New Kingdom	size	45x28x6
functional name		colour	mid dark brown	shape	
excavation no	J7-142	house/tomb		context	

date evidence	
references	Emery, et al., 1979, 116 no. 463
description	Knife tip. Fine. No resharpening.

max length	35.6	max width		retouch			
width(quarter)	24.6	thickness(quarter)				termination	
width(half)		thickness(half)	6			blade part	
width(3 quarter)		thickness(3 quarter)				segmented/truncated	

wear	

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.135

simple name	blade	period	New Kingdom	size	60x8x5
functional name		colour	speckly mid brown	shape	
excavation no	K8-65	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 842

description

max length	44.1	max width		retouch	
width(quarter)	14	thickness(quarter)	7.5	termination	
width(half)	14.2	thickness(half)	7.5	blade part	complete
width(3 quarter)	14.6	thickness(3 quarter)	5.5	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.127

simple name	blade	period	Middle Kingdom-New Kingdom	size	53x10x2
functional name		colour	cream	shape	
excavation no	H7-65	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 761

description

max length	51	max width		retouch	
width(quarter)	9.8	thickness(quarter)	2.6	termination	
width(half)	9.4	thickness(half)	2.7	blade part	complete
width(3 quarter)	10.3	thickness(3 quarter)	2.4	segmented/truncated	

wear: possible traces of mastic and use wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.132

simple name	blade, twisted	period	Middle Kingdom-New Kingdom	size	
functional name		colour	light brown	shape	
excavation no	H8-9	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 717

description

max length	48.9	max width		retouch	
width(quarter)	16.7	thickness(quarter)	4.3	termination	hinged
width(half)	15.2	thickness(half)	4.1	blade part	
width(3 quarter)	15.9	thickness(3 quarter)	2.3	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.123
simple name	flake debitage	period	Middle Kingdom-New Kingdom	size	62x33x3
functional name		colour	cream	shape	
excavation no	K9-9	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 878				
description					

max length	59.6	max width		retouch			
width(quarter)	35.1	thickness(quarter)				termination	
width(half)		thickness(half)	5.4			blade part	complete
width(3 quarter)		thickness(3 quarter)				segmented/truncated	
wear							

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.125
simple name	blade, debitage	period	Middle Kingdom-New Kingdom	size	74x28x7
functional name		colour	mid grey	shape	
excavation no	H8-81	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 1055				
description					

max length	73.3	max width		retouch			
width(quarter)	24.2	thickness(quarter)	12.8			termination	
width(half)	20.3	thickness(half)	6.8			blade part	
width(3 quarter)	17.2	thickness(3 quarter)	4.8			segmented/truncated	
wear							

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.131
simple name	sickle	period	Middle Kingdom-New Kingdom	size	58x14x2
functional name		colour	mid brown	shape	
excavation no	H8-82	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 1056				
description	Denticulated and backed.				

max length	57.4	max width		retouch	ventral		
width(quarter)	10.3	thickness(quarter)	3.7			termination	
width(half)	11	thickness(half)	4.2			blade part	distal
width(3 quarter)	12.4	thickness(3 quarter)	3.8			segmented/truncated	
wear	gloss on denticated side and traces of mastic on other						

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.137

simple name	blade	period	Middle Kingdom-New Kingdom	size	40x16x2
functional name		colour	mid brown	shape	
excavation no	K8-21	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 797				
description	.				

max length	36.5	max width		retouch	
width(quarter)	14.9	thickness(quarter)	4.3	termination	
width(half)	14.9	thickness(half)	3.5	blade part	proximal
width(3 quarter)	14.5	thickness(3 quarter)	3.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.134

simple name	blade	period	Middle Kingdom-New Kingdom	size	65x12x6
functional name		colour	cream	shape	
excavation no	H7-51	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 745				
description					

max length	63.6	max width		retouch	proximal
width(quarter)	14.2	thickness(quarter)	6.8	termination	
width(half)	14.4	thickness(half)	6.5	blade part	
width(3 quarter)	13.8	thickness(3 quarter)	6.4	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.136

simple name	blade	period	Middle Kingdom-New Kingdom	size	70x9x5
functional name		colour	mid brown	shape	
excavation no	L10-14	house/tomb		context	
date evidence					
references	Emery, et al., 1979, 117 no. 853				
description					

max length	47.3	max width		retouch	
width(quarter)	11.6	thickness(quarter)	2.9	termination	
width(half)	10.7	thickness(half)	3.1	blade part	
width(3 quarter)	7.5	thickness(3 quarter)	2.5	segmented/truncated	
wear					

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.111

simple name	blade	period	Middle Kingdom-New Kingdom	size	54x18x3
functional name		colour	light-mid brown	shape	
excavation no	H7-68	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 764

description

max length	51.1	max width		retouch	
width(quarter)	17	thickness(quarter)	4.5	termination	
width(half)	16.1	thickness(half)	5.1	blade part	complete
width(3 quarter)	16.5	thickness(3 quarter)	4.9	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.110

simple name	blade	period	Middle Kingdom-New Kingdom	size	60x15x3
functional name		colour	mid brown	shape	
excavation no	H7-67	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 763

description

max length	58.6	max width		retouch	distal
width(quarter)	15.2	thickness(quarter)	2.8	termination	
width(half)	15.1	thickness(half)	4.7	blade part	
width(3 quarter)	15.5	thickness(3 quarter)	3.2	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.121

simple name	shatter	period	Middle Kingdom-New Kingdom	size	46.8x19.6x7.7m
functional name		colour	mid brown/orange	shape	
excavation no	J7-156	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 477

description

max length	48.6	max width		retouch	
width(quarter)	10.7	thickness(quarter)	5.3	termination	
width(half)	12.5	thickness(half)	4.8	blade part	
width(3 quarter)	11	thickness(3 quarter)	4.2	segmented/truncated	

wear

PLACE	Buhen	MUSEUM	Durham	MUSEUM NO.	DUROM.1964.130

simple name	blade, crested	period	Middle Kingdom-New Kingdom	size	49x12x5
functional name		colour	mid brown	shape	
excavation no	H7-69	house/tomb		context	

date evidence

references: Emery, et al., 1979, 117 no. 765

description

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Memphis	MUSEUM	Salford	MUSEUM NO.	171.1908

simple name	sickle	period	New Kingdom or later	size	59.5x33.3x8.7
functional name		colour	mid brown/yellow	shape	
excavation no		house/tomb	temple of Proteus	context	

date evidence

references: Petrie 1909, 11-12, pl. 28.17-20

description: Denticulated sickle blade with cortex.

max length	59.5	max width	36.8	retouch	dorsal
width(quarter)	26.8	thickness(quarter)	8	termination	
width(half)	33.3	thickness(half)	8.7	blade part	
width(3 quarter)	36.8	thickness(3 quarter)	8.1	segmented/truncated	truncated one en

wear: gloss on denticulated side (dorsal and ventral)

PLACE	Memphis	MUSEUM	Salford	MUSEUM NO.	173.1908

simple name	?part of unifacial knife	period	New Kingdom or later	size	47.3x54.2x8.6
functional name		colour		shape	
excavation no		house/tomb	temple of Proteus	context	

date evidence

references: Petrie 1909, 11-12, pl. 28.17-20

description

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Gizeh	MUSEUM	Salford	MUSEUM NO.	168.1908

simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	63.5x29.3x5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb	grave V.41	context	

date evidence

references: Petrie et al. 1907, 5-6

description

max length	63.5	max width	29.3	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Memphis	MUSEUM	Salford	MUSEUM NO.	170.1908

simple name	knife fragment	period	New Kingdom or later	size	52.9x35.9x6.7
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb		context	

date evidence

references: Petrie 1909, 11-12, pl. 28.17-20

description: Remains of handle. Positive Seitenbezogenheit.

max length	52.9	max width	35.9	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	6.7	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Gizeh	MUSEUM	Salford	MUSEUM NO.	168.1908

simple name	razor, rounded ends	period	Early Dynastic, I Dynasty	size	53.2x22.5x4.5
functional name		colour	mid-dark brown	shape	
excavation no		house/tomb	grave V.?	context	

date evidence

references: Petrie et al. 1907, 5-6

description

max length	53.2	max width	22.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	4.5	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	

wear

PLACE	Memphis	MUSEUM	Salford	MUSEUM NO.	172.1908
simple name	axe rough?	period	New Kingdom or later	size	87.7x47.8x21.9c
functional name		colour	mid brown	shape	
excavation no		house/tomb	temple of Proteus	context	
date evidence					
references	Petrie 1909, 11-12, pl. 28.17-20				
description					

max length		max width		retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)		blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Memphis	MUSEUM	Salford	MUSEUM NO.	169.1908
simple name	knife	period	New Kingdom or later	size	104.9x36.5x9.1c
functional name		colour	cream	shape	
excavation no		house/tomb	temple of Proteus	context	
date evidence					
references	Petrie 1909, 11-12, pl. 28.17-20				
description	Very worn.				

max length	105	max width	36.5	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	9.1	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.172.1
simple name	axe, MK3	period	Middle Kingdom	size	84.1x97.2x14
functional name		colour	mid grey	shape	
excavation no		house/tomb		context	
date evidence					
references	Englebach and Gunn 1923, pl. VII.9				
description					

max length	84.1	max width	97.2	retouch	
width(quarter)		thickness(quarter)		termination	
width(half)		thickness(half)	14	blade part	
width(3 quarter)		thickness(3 quarter)		segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.175
simple name	knife, MK2	period	Middle Kingdom	size	182x35x8.2
functional name		colour	mid grey	shape	
excavation no		house/tomb	cemetery	context	
date evidence					
references					
description	Knife with broken tip, steep retouch on back and sinious edge on profile.				
max length	182	max width	35	retouch	
width(quarter)		thickness(quarter)	8.4	termination	
width(half)		thickness(half)	8.2	blade part	
width(3 quarter)		thickness(3 quarter)	7.6	segmented/truncated	
wear					

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.174.1
simple name	knife, OK7	period	Early Dynastic-Old Kingdom	size	163x41x9.3
functional name		colour	mid grey	shape	
excavation no		house/tomb	Grave 61, upper	context	
date evidence					
references					
description	Englebach and Gunn's 1923 list of items found in graves shows that and Early Dynastic to Old Kingdom stone vessel was also found. in the same grave. It is shown on plate XLVI. The knife has a convex back and incipient handle.				
max length	163	max width	41	retouch	
width(quarter)		thickness(quarter)	8.7	termination	
width(half)		thickness(half)	9.3	blade part	
width(3 quarter)		thickness(3 quarter)	8.5	segmented/truncated	
wear					

PLACE	Tarkhan	MUSEUM	Reading	MUSEUM NO.	1946.178
simple name	knife, OK7	period	Early Dynastic-Old Kingdom	size	169x28.3x8.5
functional name		colour	mid yellow brown	shape	
excavation no		house/tomb	grave 1247	context	
date evidence					
references	Petrie 1914,11,pl.VII.5				
description	Petrie 1914 dates other items in this grave to Sequence Date 78. The knife is flat on one side and convex on the other.				
max length	169	max width		retouch	
width(quarter)	25.6	thickness(quarter)	7.4	termination	
width(half)	28.3	thickness(half)	8.5	blade part	
width(3 quarter)	25.7	thickness(3 quarter)	7.9	segmented/truncated	
wear					

PLACE	Tarkhan	MUSEUM	Reading	MUSEUM NO.	1946.166.1

simple name	knife, OK4	period	Early Dynastic, 1st Dynasty	size	169x44.8x6.9
functional name		colour	cream	shape	
excavation no		house/tomb	grave 1982	context	

date evidence

references: Petrie 1914, 11, pl.VII

description: Petrie 1914, page 11 believed this knife to be an heirloom placed in the tomb later. The knife has a straight, even edge and hooked handle.

max length	169	max width	44.8	retouch	
width(quarter)		thickness(quarter)	6.9	termination	
width(half)	44.8	thickness(half)	6.9	blade part	
width(3 quarter)		thickness(3 quarter)	6.8	segmented/truncated	

wear

PLACE	Tarkhan	MUSEUM	Reading	MUSEUM NO.	1946.168.1

simple name	blade, pointed	period	Early Dynastic, 1st Dynasty	size	92.3x18.5x8.7
functional name		colour	mid yellow brown	shape	narrow
excavation no		house/tomb	mastaba 2055	context	

date evidence

references: Petrie 1914, 8, pl.VI

description

max length	92.3	max width		retouch	dorsal, distal end pointed
width(quarter)	18.1	thickness(quarter)	6	termination	
width(half)	18.5	thickness(half)	8.7	blade part	complete
width(3 quarter)	18.3	thickness(3 quarter)	8.6	segmented/truncated	

wear

PLACE	Tarkhan	MUSEUM	Reading	MUSEUM NO.	1946.168.2

simple name	blade, pointed	period	Early Dynastic, 1st Dynasty	size	93.5x13.8x3.7
functional name		colour	mid yellow brown	shape	narrow
excavation no		house/tomb	mastaba 2055	context	

date evidence

references: Petrie 1914, 8, pl.VI

description

max length	93.5	max width		retouch	dorsal, proximal and distal end pointed
width(quarter)	14.4	thickness(quarter)	4.6	termination	
width(half)	13.8	thickness(half)	3.7	blade part	complete
width(3 quarter)	11.1	thickness(3 quarter)	3.4	segmented/truncated	

wear

PLACE	Tarkhan	MUSEUM	Reading	MUSEUM NO.	1946.168.3

simple name	blade, pointed	period	Early Dynastic, 1st Dynasty	size	107.2x17.4x5.2
functional name		colour	mid yellow brown	shape	narrow
excavation no		house/tomb	mastaba 2055	context	

date evidence

references: Petrie 1914, 8, pl.VI

description

max length	107	max width		retouch	dorsal, proximal end pointed
width(quarter)	19.1	thickness(quarter)	3.9	termination	
width(half)	18.6	thickness(half)	5.2	blade part	complete
width(3 quarter)	17.4	thickness(3 quarter)	6.1	segmented/truncated	

wear

PLACE	Riqqeh	MUSEUM	Reading	MUSEUM NO.	1946.195.1

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	70x15.8x2.6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description: 414 in ink.

max length	70	max width		retouch	
width(quarter)	17	thickness(quarter)	2.4	termination	
width(half)	15.8	thickness(half)	2.6	blade part	
width(3 quarter)	13.3	thickness(3 quarter)	2.2	segmented/truncated	

wear

PLACE	Riqqeh	MUSEUM	Reading	MUSEUM NO.	1946.195.2

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	70.8x13.4x5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	

date evidence

references

description

max length	70.8	max width		retouch	
width(quarter)	13.5	thickness(quarter)	4.4	termination	
width(half)	13.4	thickness(half)	5	blade part	
width(3 quarter)	10.5	thickness(3 quarter)	3.8	segmented/truncated	

wear

PLACE	Riqqeh	MUSEUM	Reading	MUSEUM NO.	1946.195.3
simple name	blade	period	Middle Kingdom, 12th Dynasty	size	86.8x19.8x5.3
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	3 hinge fractures from previous removals.				

max length	86.8	max width		retouch	dorsal, distal and proximal
width(quarter)	20.2	thickness(quarter)	4	termination	
width(half)	19.8	thickness(half)	5.3	blade part	
width(3 quarter)	15.2	thickness(3 quarter)	5	segmented/truncated	
wear					

PLACE	Riqqeh	MUSEUM	Reading	MUSEUM NO.	1946.195.4
simple name	blade	period	Middle Kingdom, 12th Dynasty	size	82.7x15.2x6
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description					

max length	82.7	max width		retouch	dorsal and distal
width(quarter)	15.6	thickness(quarter)	6.5	termination	
width(half)	15.2	thickness(half)	6	blade part	
width(3 quarter)	10.9	thickness(3 quarter)	5	segmented/truncated	
wear					

PLACE	Riqqeh	MUSEUM	Reading	MUSEUM NO.	1946.195.5
simple name	blade	period	Middle Kingdom, 12th Dynasty	size	72.1x12.4x3.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb		context	
date evidence					
references					
description	689 in ink.				

max length	72.1	max width		retouch	
width(quarter)	12.5	thickness(quarter)	3.2	termination	
width(half)	11.4	thickness(half)	3.5	blade part	
width(3 quarter)	12.4	thickness(3 quarter)	3.6	segmented/truncated	
wear					

PLACE	Riqqeh	MUSEUM	Reading	MUSEUM NO.	1946.195.6

simple name	blade	period	Middle Kingdom, 12th Dynasty	size	77.9x11.5x3.5		
functional name		colour	light grey	shape	narrow		
excavation no		house/tomb		context			
date evidence							
references							
description	189 in ink.						
max length	77.9	max width		retouch			
width(quarter)	18.3	thickness(quarter)	2.7	termination			
width(half)	18.2	thickness(half)	3.5	blade part			
width(3 quarter)	11.5	thickness(3 quarter)	3	segmented/truncated			
wear							

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.1

simple name	blade, Intermediate	period	Early Dynastic-Old Kingdom	size	83.1x26.4x7.8		
functional name	Intermediate	colour		shape	intermediate		
excavation no		house/tomb	grave 39	context			
date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave						
references	Englebach and Gunn 1923						
description	In the grave list the only other items appart from flints in the grave are fish remains.						
max length	83.1	max width		retouch	dorsal		
width(quarter)	24.5	thickness(quarter)	8.8	termination			
width(half)	26.4	thickness(half)	7.8	blade part	medial		
width(3 quarter)	22.4	thickness(3 quarter)	5.6	segmented/truncated			
wear							

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.2

simple name	blade	period	Early Dynastic-Old Kingdom	size	81.4x10.4x3.4		
functional name		colour	dark red/brown	shape	narrow		
excavation no		house/tomb	grave 39	context			
date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave						
references	Englebach and Gunn 1923						
description	In the grave list the only other items appart from flints in the grave are fish remains.						
max length	81.4	max width		retouch			
width(quarter)	11.9	thickness(quarter)	3.7	termination			
width(half)	10.4	thickness(half)	3.4	blade part			
width(3 quarter)	10.3	thickness(3 quarter)	3.3	segmented/truncated			
wear							

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.3
simple name	blade	period	Early Dynastic-Old Kingdom	size	81.5x16.8x8.1
functional name		colour	mid grey	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains. This item has a hinge fracture from a previous removal.

max length	81.5	max width		retouch	
width(quarter)	18.4	thickness(quarter)	6	termination	
width(half)	16.8	thickness(half)	8.1	blade part	
width(3 quarter)	17.6	thickness(3 quarter)	10.5	segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.4
simple name	blade	period	Early Dynastic-Old Kingdom	size	68x12.8x3.5
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	68	max width		retouch	
width(quarter)	13	thickness(quarter)	2.7	termination	
width(half)	12.8	thickness(half)	3.5	blade part	
width(3 quarter)	11	thickness(3 quarter)	2.7	segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.5
simple name	blade	period	Early Dynastic-Old Kingdom	size	72.7x12.5x4.1
functional name		colour	mid brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	72.7	max width		retouch	distal lateral and dorsal notch and proxi
width(quarter)	12	thickness(quarter)	4.1	termination	
width(half)	12.5	thickness(half)	4.1	blade part	
width(3 quarter)	13.2	thickness(3 quarter)	3.6	segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.6

simple name	blade	period	Early Dynastic-Old Kingdom	size	50x13.4x2.8
functional name		colour	light grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	50	max width		retouch	
width(quarter)	12.6	thickness(quarter)	2.8	termination	
width(half)	13.4	thickness(half)	2.8	blade part	proximal
width(3 quarter)	13.5	thickness(3 quarter)	2.7	segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.7

simple name	blade	period	Early Dynastic-Old Kingdom	size	79x10.4x3
functional name		colour	light grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	79	max width		retouch	
width(quarter)	11.7	thickness(quarter)	3	termination	
width(half)	10.4	thickness(half)	3	blade part	complete
width(3 quarter)	9.8	thickness(3 quarter)	2.3	segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.8

simple name	blade	period	Early Dynastic-Old Kingdom	size	72.6x11.1x3.8
functional name		colour	mid grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	72.6	max width		retouch	
width(quarter)	13.2	thickness(quarter)	3.1	termination	
width(half)	11.1	thickness(half)	3.8	blade part	complete
width(3 quarter)	10	thickness(3 quarter)	4.1	segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.9
simple name	blade, pointed	period	Early Dynastic-Old Kingdom	size	16.3x15.5x4.1
functional name		colour	mid grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	
date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave				
references	Englebach and Gunn 1923				
description	In the grave list the only other items appart from flints in the grave are fish remains.				

max length	76.3	max width		retouch	proximal and dorsal		
width(quarter)	15.9	thickness(quarter)	3.3			termination	
width(half)	15.5	thickness(half)	4.1			blade part	complete
width(3 quarter)	12.2	thickness(3 quarter)	3.1			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.10
simple name	blade	period	Early Dynastic-Old Kingdom	size	70.5x11x2.6
functional name		colour	mid grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	
date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave				
references	Englebach and Gunn 1923				
description	In the grave list the only other items appart from flints in the grave are fish remains.				

max length	70.5	max width		retouch	proximal and dorsal		
width(quarter)	12.2	thickness(quarter)	2.3			termination	
width(half)	11	thickness(half)	2.6			blade part	distal
width(3 quarter)	9.3	thickness(3 quarter)	2.7			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.11
simple name	blade, pointed	period	Early Dynastic-Old Kingdom	size	109.2x13.8x4.9
functional name		colour	mid grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	
date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave				
references	Englebach and Gunn 1923				
description	In the grave list the only other items appart from flints in the grave are fish remains.				

max length	109	max width		retouch	proximal and dorsal		
width(quarter)	13.9	thickness(quarter)	3.2			termination	
width(half)	13.8	thickness(half)	4.9			blade part	complete
width(3 quarter)	11.1	thickness(3 quarter)	4.5			segmented/truncated	
wear							

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.12

simple name	blade, pointed	period	Early Dynastic-Old Kingdom	size	73.1x11.6x3.6
functional name		colour	mid grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	73.1	max width		retouch	proximal and dorsal		
width(quarter)	10.7	thickness(quarter)	3.4			termination	
width(half)	11.6	thickness(half)	3.6			blade part	complete
width(3 quarter)	11	thickness(3 quarter)	4.7			segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.13

simple name	blade, pointed	period	Early Dynastic-Old Kingdom	size	100.3x13.9x3.5
functional name		colour	mid grey/brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	100	max width		retouch	proximal and dorsal		
width(quarter)	14.1	thickness(quarter)	3.1			termination	
width(half)	13.9	thickness(half)	3.5			blade part	complete
width(3 quarter)	13.7	thickness(3 quarter)	4.1			segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.14

simple name	blade, pointed	period	Early Dynastic-Old Kingdom	size	67.8x13.1x3.1
functional name		colour	light grey	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence: Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave

references: Englebach and Gunn 1923

description: In the grave list the only other items appart from flints in the grave are fish remains.

max length	67.8	max width		retouch	proximal and dorsal		
width(quarter)	13.1	thickness(quarter)	3.1			termination	
width(half)	12.4	thickness(half)	3.1			blade part	complete
width(3 quarter)	10.1	thickness(3 quarter)	2.7			segmented/truncated	

wear:

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.15

simple name	blade, pointed	period	Early Dynastic-Old Kingdom	size	41.7x12.7x2.4
functional name		colour	light brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave
references	Englebach and Gunn 1923
description	In the grave list the only other items appart from flints in the grave are fish remains.

max length	41.7	max width		retouch	proximal and dorsal		
width(quarter)	12.7	thickness(quarter)	2.2			termination	
width(half)	12.4	thickness(half)	2.4			blade part	proximal
width(3 quarter)	12.1	thickness(3 quarter)	2.2			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.16

simple name	blade, pointed	period	Early Dynastic-Old Kingdom	size	85.6x10.1x4.2
functional name		colour	light brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave
references	Englebach and Gunn 1923
description	In the grave list the only other items appart from flints in the grave are fish remains.

max length	85.6	max width		retouch	proximal and dorsal		
width(quarter)	10	thickness(quarter)	2.9			termination	
width(half)	10.1	thickness(half)	4.2			blade part	complete
width(3 quarter)	10	thickness(3 quarter)	4.1			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.18

simple name	blade	period	Early Dynastic-Old Kingdom	size	40.7x8.4x2.4
functional name		colour	light brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave
references	Englebach and Gunn 1923
description	In the grave list the only other items appart from flints in the grave are fish remains.

max length	40.7	max width		retouch	proximal and dorsal		
width(quarter)	8.5	thickness(quarter)	2.3			termination	
width(half)	8.4	thickness(half)	2.4			blade part	proximal
width(3 quarter)	7.8	thickness(3 quarter)	2.3			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.19

simple name	blade	period	Early Dynastic-Old Kingdom	size	39.1x12.6x2.8
functional name		colour	light brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave
references	Englebach and Gunn 1923
description	In the grave list the only other items appart from flints in the grave are fish remains.

max length	39.1	max width		retouch	proximal and dorsal		
width(quarter)	12.6	thickness(quarter)	2.6			termination	
width(half)	11	thickness(half)	2.8			blade part	distal
width(3 quarter)	8.8	thickness(3 quarter)	2.3			segmented/truncated	

wear	

PLACE	Harageh	MUSEUM	Reading	MUSEUM NO.	1946.180.20

simple name	blade, retouched	period	Early Dynastic-Old Kingdom	size	40.5x8.2x3.7
functional name	sickle	colour	light brown	shape	narrow
excavation no		house/tomb	grave 39	context	

date evidence	Other graves in this cemetery were of this date and the date fits with the types of flint fount in the grave
references	Englebach and Gunn 1923
description	In the grave list the only other items appart from flints in the grave are fish remains.

max length	40.5	max width		retouch	ventral left		
width(quarter)	9.1	thickness(quarter)	3.7			termination	
width(half)	8.2	thickness(half)	3.7			blade part	distal
width(3 quarter)	7.2	thickness(3 quarter)	3.2			segmented/truncated	

wear	gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.1

simple name	blade, retouched, lateral	period	Middle Kingdom	size	39.6x14.8x3.7
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence	Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades
references	Naville and Griffith 1890, 39
description	Gloss dorsal and ventral along lateral edge with serrations.

max length	39.6	max width		retouch	ventral		
width(quarter)		thickness(quarter)				termination	
width(half)	14.8	thickness(half)	3.7			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	seg+trunc

wear	gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.2

simple name	blade, retouched, lateral	period	Middle Kingdom	size	35.5x12.2x2.6
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence: Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades

references: Naville and Griffith 1890, 39

description: Gloss dorsal and ventral along lateral edge with serrations. 240 in ink on reverse.

max length	35.5	max width		retouch	dorsal and ventral		
width(quarter)		thickness(quarter)				termination	
width(half)	12.2	thickness(half)	2.6			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	seg

wear: gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.3

simple name	blade, retouched, lateral	period	Middle Kingdom	size	43.3x17.2x4
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence: Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades

references: Naville and Griffith 1890, 39

description: Gloss dorsal and ventral along lateral edge with serrations.

max length	43.3	max width		retouch	dorsal and ventral		
width(quarter)		thickness(quarter)				termination	
width(half)	17.2	thickness(half)	4			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	seg

wear: gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.4

simple name	blade, retouched, lateral	period	Middle Kingdom	size	43.3x12.7x4.1
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence: Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades

references: Naville and Griffith 1890, 39

description: Gloss dorsal and ventral along lateral edge with serrations. 240 in ink on reverse

max length	43.3	max width		retouch	ventral		
width(quarter)		thickness(quarter)				termination	
width(half)	12.7	thickness(half)	4.1			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	seg

wear: gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.5
simple name	blade, retouched, lateral	period	Middle Kingdom	size	45.5x20x6.4
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence: Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades

references: Naville and Griffith 1890, 39

description: Gloss dorsal and ventral along lateral edge with serrations.

max length	45.5	max width		retouch	ventral
width(quarter)		thickness(quarter)		termination	
width(half)	20	thickness(half)	6.4	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	seg

wear: gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.6
simple name	blade, retouched, lateral	period	Middle Kingdom	size	56.3x14x5.2
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence: Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades

references: Naville and Griffith 1890, 39

description: Gloss dorsal and ventral along lateral edge with serrations.

max length	56.3	max width		retouch	ventral
width(quarter)		thickness(quarter)		termination	
width(half)	14	thickness(half)	5.2	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	seg

wear: gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.7
simple name	blade, retouched, lateral	period	Middle Kingdom	size	48.3x14.7x3.3
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence: Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades

references: Naville and Griffith 1890, 39

description: Gloss dorsal and ventral along lateral edge with serrations.

max length	48.3	max width		retouch	ventral
width(quarter)		thickness(quarter)		termination	
width(half)	14.7	thickness(half)	3.3	blade part	medial
width(3 quarter)		thickness(3 quarter)		segmented/truncated	trunc

wear: gloss

PLACE	Tell el Yahudiya	MUSEUM	Reading	MUSEUM NO.	1946.194.8

simple name	blade, retouched, lateral	period	Middle Kingdom	size	33.4x13.5x3.9
functional name	sickle	colour		shape	intermediate
excavation no		house/tomb		context	

date evidence	Naville and Griffith 1890 The Antiquities of Tell el Yahudiya 39 describe mainly sickle blades from this site. As the flints came to Reading Museum pre 1906 it is assumed that these are the same blades
references	Naville and Griffith 1890, 39
description	Gloss dorsal and ventral along lateral edge with serrations.

max length	33.4	max width		retouch	dorsal and ventral		
width(quarter)		thickness(quarter)				termination	
width(half)	13.5	thickness(half)	3.9			blade part	medial
width(3 quarter)		thickness(3 quarter)				segmented/truncated	seg+trunc

wear	gloss